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c. STREET AD								c. CITY White C	itv			
	NE 82nd Avenue				- 07475	4 7ID 00D		d. STATE	e. ZIP CODE			
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SCHEDULE

1.1 PRICE/COST SCHEDULE

The VA intends to award the Base Bid if offered prices are within available funding (reference availability of funds clause).

Contractor shall furnish all labor, tools, materials, supplies and equipment necessary to complete the project in accordance with the statement of work, specifications, and drawings.

IIEM	DESCRIPTION	QTY	UNIT	PRICE
NO.				
0001	Base Bid Item – Complete enhancement of			
	corridor in accordance with statement of work,			
	specifications, and drawings.	1	JB	\$
	(Period of performance - 56 calendar days)			
0002	Option 1 – Complete CC220 and CC219			
	enhancements in accordance with statement of work, specifications, and drawings.	1	JВ	\$
	(Period of performance - 28 calendar days)			
0003	Option 2 – Complete CC239 enhancement in			
	accordance with statement of work, specifications, and drawings.	1	JB	\$
	(Period of performance – 40 calendar days)			
0004	Option 3 – Complete B206, CC206 and CC207			
	enhancements in accordance with statement of			
	work, specifications, and drawings.	1	JB	\$
	(Period of performance – 56 calendar days)			
		Total	Options	\$
			Total	\$

INSTRUCTIONS, CONDITIONS AND OTHER STATEMENTS TO BIDDERS/OFFERORS

2.1 INFORMATION TO OFFERORS GENERAL:

This procurement is issued under the terms and conditions of your Indefinite Delivery Indefinite Quantity (IDIQ) Multiple Task Order Contract (MATOC). In accordance with (IAW) Federal Acquisition Regulation (FAR) Part 14, Sealed Bidding, the solicitation provisions and contract clauses apply to this procurement.

Quote/bidding materials are available in electronic format, only, and are available to prime contractors that hold an IDIQ MATOC for maintenance, repair and new construction services for stations primarily located in Washington and Oregon. Prime contractors may share bidding materials with subcontractors and suppliers as necessary. However, all questions shall be submitted through/by the prime contractors on behalf of their subcontractors and suppliers.

STATEMENT OF WORK:

The Contractor shall provide all labor, tools, equipment, materials and supplies necessary to perform the work identified in the specifications and drawings. The general work includes, but is not limited to corridor beautification.

Project Location: VA Medical Center, White City, Oregon

ADDITIONAL TERMS AND CONDITIONS:

- A. Construction Magnitude: IAW VAAR 836.204, the magnitude of construction is between \$500,000 and \$1,000,000.
- B. **Payment and Performance Bonds:** Are required per FAR Clause 52.228-15.
- C. **Bid Bond:** Is required per FAR 52.228-1.
- D. **Work:** The contractor shall execute on site and with his own organization, actual construction work equivalent to not less than 15% of total amount of work to be performed under the contract. Construction by special trade contractors, contractor shall execute on site and with his own organization, actual construction work equivalent to not less than 25% of total amount of work to be performed under the contract.
- E. **Special Note:** This procurement is subject to the requirements of the Buy American Act. The requirements are set forth in the General Conditions.
- F. **Caution:** No oral statements made by the contract parties or other interested parties will take precedence over the written terms and conditions of the solicitation or resultant contract.
- G. **Prebid Conference and Site Visit:** Reference FAR Provision 52.236-27 on Page 8 for date, time and location.
- H. **Questions Regarding the Solicitation and Project:** Shall be submitted in writing to Alyssa Dark, Contract Specialist, via e-mail at alyssa.dark@va.gov. Contractors shall include Grant Furulie (carbon copy) on all questions, at grant.furulie@va.gov. Questions will be accepted up to close of business on December 20, 2012. The government is not obligated to answer any questions submitted after this date.

Furthermore, <u>all questions shall</u> be submitted by the prime contractor(s) on behalf of their subcontractor(s) and supplier(s) to the Contract Specialist. Questions submitted by subcontractors and/or suppliers directly to the Contract Specialist will be rejected and not answered.

I. **RFQ/Bid Due Date:** Quotes/bids are to be submitted electronically, mail or by hand to the assigned Contract Specialist by the date and time indicated in Block 10 of the SF18. A public bid opening will be not be held but the quote/bid results will be provided within 24-hours of the due date and time.

2.2 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a Firm Fixed Price contract resulting from this solicitation.

(End of Provision)

2.3 52.217-5 EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

(End of Provision)

2.4 52.222-5 DAVIS-BACON ACT--SECONDARY SITE OF THE WORK (JUL 2005)

- (a)(1) The offeror shall notify the Government if the offeror intends to perform work at any secondary site of the work, as defined in paragraph (a)(1)(ii) of the FAR clause at 52.222-6, Davis-Bacon Act, of this solicitation.
- (2) If the offeror is unsure if a planned work site satisfies the criteria for a secondary site of the work, the offeror shall request a determination from the Contracting Officer.
- (b)(1) If the wage determination provided by the Government for work at the primary site of the work is not applicable to the secondary site of the work, the offeror shall request a wage determination from the Contracting Officer.
- (2) The due date for receipt of offers will not be extended as a result of an offeror's request for a wage determination for a secondary site of the work.

(End of Provision)

2.5 52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

- (a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.
- (b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
2.4 %	6.9 %

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

- (c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.
- (d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the--
 - (1) Name, address, and telephone number of the subcontractor;
 - (2) Employer's identification number of the subcontractor;
 - (3) Estimated dollar amount of the subcontract:
 - (4) Estimated starting and completion dates of the subcontract; and
 - (5) Geographical area in which the subcontract is to be performed.
- (e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Jackson County, White City, Oregon

(End of Provision)

2.6 52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT -- CONSTRUCTION MATERIALS (FEB 2009)

- (a) *Definitions*. "Commercially available off-the-shelf (COTS) item," "construction material," "domestic construction material," and "foreign construction material," as used in this provision, are defined in the clause of this solicitation entitled "Buy American Act--Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).
- (b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.
- (c) Evaluation of offers.
- (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

- (2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.
- (d) Alternate offers.
- (1) When an offer includes foreign solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.
- (2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.
- (3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--
 - (i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or
 - (ii) May be accepted if revised during negotiations.

(End of Provision)

2.7 52.228-1 BID GUARANTEE (SEP 1996)

- (a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.
- (b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-
- (c) The amount of the bid guarantee shall be 20 percent of the bid price or \$3,000,000.00, whichever is less.-
- (d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.
- (e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of Provision)

2.8 52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995) ALTERNATE I (FEB 1995)

- (a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.
 - (b) An organized site visit has been scheduled for-

December 12, 2012 at 1:00 p.m. (PST)

(c) Participants will meet at-

VA SORCC, White City

(End of Provision)

2.9 VAAR 852.270-1 REPRESENTATIVES OF CONTRACTING OFFICERS (JAN 2008)

The contracting officer reserves the right to designate representatives to act for him/her in furnishing technical guidance and advice or generally monitor the work to be performed under this contract. Such designation will be in writing and will define the scope and limitation of the designee's authority. A copy of the designation shall be furnished to the contractor.

(End of Provision)

REPRESENTATIONS AND CERTIFICATIONS

3.1 52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (MAY 2012)

- (a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 236220.
- (2) The small business size standard is \$33.5 Million.
- (3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.
- (b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (d) of this provision applies.
- (2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:
 - [] (i) Paragraph (d) applies.
- [] (ii) Paragraph (d) does not apply and the offeror has completed the individual representations and certifications in the solicitation.
- (c)(1) The following representations or certifications in ORCA are applicable to this solicitation as indicated:
- (i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless--
 - (A) The acquisition is to be made under the simplified acquisition procedures in Part 13;
 - (B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or
 - (C) The solicitation is for utility services for which rates are set by law or regulation.
- (ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.
- (iii) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the clause at 52.204-7, Central Contractor Registration.
 - (iv) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that-
 - (A) Are not set aside for small business concerns;
 - (B) Exceed the simplified acquisition threshold; and
 - (C) Are for contracts that will be performed in the United States or its outlying areas.
- (v) 52.209-2, Prohibition on Contracting with Inverted Domestic Corporations--Representation. This provision applies to solicitations using funds appropriated in fiscal years 2008, 2009, 2010, or 2012.

- (vi) 52.209-5, Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.
- (vii) 52.214-14, Place of Performance--Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.
- (viii) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.
- (ix) 52.219-1, Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.
 - (A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.
 - (B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.
- (x) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.
- (xi) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.
- (xii) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.
- (xiii) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial items.
- (xiv) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.
- (xv) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA-designated items.
 - (xvi) 52.225-2, Buy American Act Certificate. This provision applies to solicitations containing the clause at 52.225-1.
- (xvii) 52.225-4, Buy American Act--Free Trade Agreements--Israeli Trade Act Certificate. (Basic, Alternates I, II, and III.) This provision applies to solicitations containing the clause at 52.225-3.
 - (A) If the acquisition value is less than \$25,000, the basic provision applies.
 - (B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.
 - (C) If the acquisition value is \$50,000 or more but is less than \$77,494, the provision with its Alternate II applies.
 - (D) If the acquisition value is \$77,494 or more but is less than \$100,000, the provision with its Alternate III applies.
 - (xviii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-

5.

- (xix) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan--Certification. This provision applies to all solicitations.
- (xx) 52.225-25, Prohibition on Contracting with Entities Engaging in Sanctioned Activities Relating to Iran--Representation and Certification. This provision applies to all solicitations.
- (xxi) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to--
- (A) Solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions; and
- (B) For DoD, NASA, and Coast Guard acquisitions, solicitations that contain the clause at 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns.
 - (2) The following certifications are applicable as indicated by the Contracting Officer:
 - [](i) 52.219-22, Small Disadvantaged Business Status.
 - [](A) Basic.
 - [](B) Alternate I.
 - [](ii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.
- [](iii) 52.222-48, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment Certification.
- [](iv) 52.222-52 Exemption from Application of the Service Contract Act to Contracts for Certain Services--Certification.
- [](v) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Alternate I only).
 - [](vi) 52.227-6, Royalty Information.
 - [](A) Basic.
 - [](B) Alternate I.
 - [](vii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.
- (d) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website accessed through https://www.acquisition.gov. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause #	Title	Date	Change

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of Provision)

GENERAL CONDITIONS

4.1 52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 56 calendar days from NTP (for base item only) - if options are exercised the following time will be added to the period of performance: 28 calendar days for option 1, 40 calendar days for option 2, and 56 calendar days for option 3. The time stated for completion shall include final cleanup of the premises.

(End of Clause)

4.2 52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within 120 calendar days from NTP. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of Clause)

4.3 52.228-15 PERFORMANCE AND PAYMENT BONDS-- CONSTRUCTION (OCT 2010)

(a) Definitions. As used in this clause--

"Original contract price" means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

- (b) Amount of required bonds. Unless the resulting contract price is \$150,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:
- (1) *Performance bonds* (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.
- (2) *Payment Bonds* (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.
 - (3) Additional bond protection.
- (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.
- (ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.
- (c) *Furnishing executed bonds*. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) *Surety or other security for bonds*. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the *Federal Register* or may be obtained from the:

U.S. Department of Treasury
Financial Management Service
Surety Bond Branch
3700 East West Highway, Room 6F01
Hyattsville, MD 20782.

Or via the internet at http://www.fms.treas.gov/c570/.

(e) *Notice of subcontractor waiver of protection (40 U.S.C. 3133(c))*. Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of Clause)

4.4 LIST OF ATTACHMENTS:

See attached document: Attachment 1 Wage Decision.

See attached document: Attachment 2 Specifications.

See attached document: Attachment 3 Drawings.

See attached document: Attachment 4 SOW.

General Decision Number: OR120026 08/03/2012 OR26

Superseded General Decision Number: OR20100040

State: Oregon

Construction Type: Building

County: Jackson County in Oregon.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Modification Number	Publication Date
0	01/06/2012
1	01/13/2012
2	02/10/2012
3	03/09/2012
4	04/06/2012
5	06/15/2012
6	06/29/2012
7	07/20/2012
8	08/03/2012

* BROR0001-017 06/01/2012

	Rates	Fringes
BRICK FINISHER	¢ 21 ৪6	10.84
BRICKLAYER		15.80
TILE FINISHER	•	10.19
TILE SETTER	.\$ 29.19	13.27
CARP0001-028 10/01/2011		

	Rates	Fringes	
Carpenters:			
Metal stud installation			
and form work only	\$ 32.04	14.18	
MILLWRIGHT	\$ 32.54	14.18	
			-
CARP9001-004 06/20/2007			

	Rates	Fringes	
Acoustical Ceiling Installer & Drywall Hanger	\$ 27.95	13.52	
TT TGO (F.O. 0.1 0.1 /0.1 /0.1 0			

ELEC0659-012 01/01/2012

	Rates	Fringes	
ELECTRICIAN	\$ 30.02	14.45	

ELEC0659-013 01/01/2012

Rates Fringes

Communications & Systems Technician

Computer I	nstallation\$	16.00	10.90
Electrical	Installers		
Alarms and	Low Voltage		
Wiring for	Alarms\$	24.90	10.90

ENGI0701-023 01/01/2012

	Rates	Fringes
Power equipment operators:		
GROUP 1	\$ 37.27	12.08
GROUP 1A	\$ 39.13	12.08
GROUP 1B	\$ 41.00	12.08
GROUP 2	\$ 35.64	12.08
GROUP 3	\$ 34.65	12.08
GROUP 4	\$ 33.71	12.08
GROUP 5		12.08
GROUP 6	\$ 29.61	12.08

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: CRANE: Helicopter Operator, when used in erecting work; Whirley Operator, 90 ton and over; LATTICE BOOM CRANE: Operator 200 tons through 299 tons, and/or over 200 feet boom; HYDRAULIC CRANE: Hydraulic Crane Operator 90 tons through 199 tons with luffing or tower attachments

GROUP 1A: HYDRAULIC CRANE: Hydraulic Operator, 200 tons and over (with luffing or tower attachment); LATTICE BOOM CRANE: Operator, 200 tons through 299 tons, with over 200 feet boom;

GROUP 1B: LATTICE BOOM CRANE: Operator, 300 tons through 399 tons with over 200 feet boom; Operator 400 tons and over

GROUP 2: CRANE: Cableway Operator, 25 tons and over;
HYDRAULIC CRANE: Hydraulic crane operator 90 tons through
199 tons (without luffing or tower attachment);
TOWER/WHIRLEY OPERATOR: Tower Crane Operator; Whirley
Operator, under 90 tons; LATTICE BOOM CRANE: 90 through 199
tons and/or 150 to 200 feet boom; HYDRAULIC CRANE:
Hydraulic crane operator, 50 tons through 89 tons (with
luffing or tower attachment); BLADE: Auto Grader; Blade
Operator-Robotic; Rubber tired scraper with tandom
scrapers, multi-engineTrenching Machine-Wheel Operator;
Excavator over 130,000 lbs

GROUP 3: HYDRAULIC CRANE: Hydraulic crane operator, 50 tons through 89 tons (without luffing or tower attachment); LATTICE BOOM CRANES: Lattice Boom Crane-50 through 89 tons (and less than 150 feet boom); Rubber Tired Scraper: with tandom scrapers; self loading, paddle wheel, auger type, finish and/or 2 or more units; Excavator over 80,000 through 130,000 lbs

GROUP 4: CRANE: Hydraulic Crane Operator, under 50 tons; LATTICE BOOM CRANE OPERATOR: Lattice Boom Crane Operator, under 50 tons; TRACKHOE/EXCAVATOR-ROBOTIC: up to and

including 20,0000 lbs. with any or all attachments; Excavator Operator over 20,000 lbs through 80,000 lbs.; BLADE: Blade operator; Tractor operator with boom attachment; DRILLING: Churm Drill and Earth Boring Machine Operator; Directional Drill Operator over 20,000 lbs pullback; CRANE: Chicago boom and similar types; Boom type lifting device, 5 ton capacity or less; HYDRAULIC HOES: Robotic Hydraulic backhoe operator, track and wheel type up to and including 20,0000 lbs. with any or all attachments; Asphalt Paver; Screed Operator; Rubber-Tired Scraper, single engine, single scraper; Compactor-Self Propelled; Trenching Machine, digging capacity over 3 ft Depth; Excavator over 20,000 lbs through 80,000 lbs.

GROUP 5: TRACKHOE/EXCAVATOR-HYDRAULIC: up to and including 20,000 lbs.; Boom truck operator; DRILLING: Churm Drill and Earth Boring Machine Operator; Directional Drill Operator less than 20,000 lbs pullback; HYDRAULIC HOES: Hydraulic Backhoe Operator, wheel type (Ford, John Deere, Case type); Hydraulic Backhoe Operator track type up to and including 20,000 lbs.; Concrete Pumper; Concrete Paver: Compactor

GROUP 6: LOADERS: (less than 1 cu yd.); Roller (Non-Asphalt); Oiler; Bobcat/Skid Loader; Grade Checker; Crane oiler; Drill Assistant

IRON0029-012 01/01/2012		
	Rates	Fringes
IRONWORKER (Ornamental and Structural)		20.10
LABO0001-030 06/01/2008		
	Rates	Fringes
Laborers: (Mason Tender-Cement/Concrete)	\$ 25.75	11.25
LABO0001-031 06/01/2008		
	Rates	Fringes
Laborers: (Mason Tender-Brick)	\$ 25.75	11.25
LABO0001-032 06/01/2008		
	Rates	Fringes
Laborers: (Mason Tender-Stone)		11.25
LABO0003-008 06/01/2010		
	Rates	Fringes
Laborers: GROUP 1	\$ 25.91	12.07 12.07 12.07

GROUP 4	.\$ 26.80	12.07
LABORER CLASSIFICATIONS		
GROUP 1: Form-Stripping		
GROUP 2: Power Tool Operator		
GROUP 3: Vibrating Plate		
GROUP 4: Grade Checker, Pipelay	er	
PAIN0740-002 07/01/2012		
	Rates	Fringes
GLAZIER	.\$ 35.20	13.59
PLAS0082-003 06/01/2011		
	Rates	Fringes
PLASTERER	.\$ 25.08	11.32
PLAS0555-006 06/01/2012		
	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	.\$ 29.98	17.76
PLUM0290-008 04/01/2011		
	Rates	Fringes
Plumbers and Pipefitters	.\$ 36.69	20.09
SHEE0016-014 07/01/2009		
	Rates	Fringes
Sheet Metal Worker (INCLUDING HVAC DUCT INSTALLATION)		14.32
SUOR2009-024 11/09/2009		
	Rates	Fringes
CARPENTER, Excludes Acoustical Ceiling Installation, Drywall Hanging, Form Work, and Metal		
Stud Installation	.\$ 22.87	9.33
ELECTRICIAN (Low Voltage Wiring)	.\$ 20.75	9.30
IRONWORKER, REINFORCING	.\$ 25.82	10.89
LABORER: Common or General	.\$ 19.34	7.46

LABORER: La	andscape\$	14.02	2.63
OPERATOR: F	Forklift\$	19.09	7.89
PAINTER: Br	rush Only\$	17.92	0.00
רא דאיייבים י רי	~ m.		
PAINTER: Dr Finishing/Ta	aping\$	26.39	0.00
PAINTER: RO	oller\$	17.92	0.00
PAINTER: Sp	pray\$	17.92	0.00
•	Ludes Installation ofs\$	16.31	5.38
TRUCK DRIVER	R: Dump Truck\$	15.50	9.05
TRUCK DRIVER	R: Water Truck\$	18.40	5.33

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any

changes in the collective bargaining agreements governing the rate.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations Wage and Hour Division U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

DEPARTMENT OF VETERANS AFFAIRS SPECIFICATIONS

VA – White City Interiors, Connecting Corridors and Building Hubs Corridor Beautification and Flooring

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DEPARTMENT OF VETERANS AFFAIRS LIST OF DRAWING SHEETS

VA – White City

Interiors, Connecting Corridors and Building Hubs

The drawings listed below accompanying this specification form a part of the contract.

Drawing No. Title

	ARCHITECTURAL
A0.1 R2	ABBREV, SYMBOLS, PROJECT SUMMARY, GENERAL NOTES, INDEX OF DRAWINGS, LOCATION MAP, VICINITY MAP & LEGEND AND DESIGN TEAM
A1.1	PRIMARY INTERSECTIONS FLOOR AND DEMOLITION PLANS AND KEY NOTES AND TYPICAL FLOOR PATTERN LAYOUT
A1.2	SECONDARY INTERSECTIONS & HUBS, FLOOR AND DEMOLITIONS PLANS AND KEY NOTES
A1.3	REFLECTED CEILING PLAN, PRIMARY INTERSECTIONS AND, TYPICAL HUB AND CEILING NOTES & LEGEND
A1.4	REFLECTED CEILING PLAN, SECONDARY INTERSECTIONS AND CEILING NOTES & LEGEND
A2.1	INTERIOR ELEVATIONS, TYPICAL CONNECTING CORRIDOR AND PRIMARY INTERSECTION B WITH KEY NOTES
A2.2	INTERIOR ELEVATIONS, TYPICAL BUILDING HUB AND KEY NOTES
A5.1	DETAILS

692-12-207 00 01 15

DEPARTMENT OF VETERANS AFFAIRS

VA – White City Interiors, Connecting Corridors and Building Hubs

SECTION 01 00 00 GENERAL REQUIREMENTS

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SECTION 01 00 00 GENERAL REQUIREMENTS

1.1 GENERAL INTENTION

- A. Definitions: See paragraph 3, Summary of the Work, Sheet A0.1 R2.
- B. <u>Project Summary</u>: See "Project Scope of Work". This work will be Interiors, including the rebuilding, refurbishing and refinishing of select existing Connecting Corridors, Intersections of Connecting Corridors and Building Hubs (see Definitions above).

Area will be occupied and in use throughout this work. Provide safe passage at all times. Coordinate with COTR and Campus Medical and Administrative staff prior to start of work.

Overall project will be divided into defined areas of work. Each project will be stand alone, and as defined in the Invitation to Bidder(s).

When complete, this work will include remodeling of key Intersections, moving of some walls and doors, additions of pilasters and soffits, and changes to ceilings and lighting. All Connecting Corridors will receive new floor, wainscot and wall finishes, new ceiling or ceiling tile and refurbishing and refinishing of existing ceiling suspension grid, changes to trim at associated windows, detailing, as hand and/or crash rails as noted, and lighting and controls.

- C. Provide scaffolding and barriers for access and safety throughout this work.
- D. Successful Bidder will be required to provide a project schedule and weekly updates in a format and means acceptable to the COTR
- E. Demolition and preparation is expected to the extent called for to accommodate new work.
 - 1. Carefully remove and protect existing items to be reused in new work and all infrastructure, items and finishes to remain (ie) fire sprinkler system, etc. Items to be removed during the work but rehung after includes existing signage, artwork, bulletin boards and VA posters.
 - 2. Rehanging of signage, artwork and bulletin boards will be as directed.
 - 3. Coordinate with Facilities COTR, Administrative and Medical staff prior to work in any area.
- F. Visits to the site by Bidders may be made only by appointment with the COTR.
- G. Office of ADW, Architectural Design Works Inc as Architects may render certain technical services during bidding and construction. Such services shall be considered as advisory to the Government and shall not be construed as expressing or implying a contractual act of the Government without affirmations by COTR or his duly authorized representative. ADW in consultation with and for the COTR will issue addendum if needed prior to bidding.
- H. Before start of work and order of materials and finishes, provide samples for COTR review and approval.

- I. All employees of general contractor and subcontractors shall comply with VA security management program and obtain permission from the VA police, be identified by project and employer, and restricted from unauthorized access.
- J. Prior to commencing work, general contractor shall provide proof that a OSHA certified "competent person" (CP) (29 CFR 1926.20(b)(2) will be providing oversight throughout this work. VA SORCC defines a certified "competent person" as having successfully completed the 30 hour OSHA certified Construction Safety course.

K. Training:

- 1. All employees of general contractor or subcontractors shall have the 10-hour OSHA certified Construction Safety course and /or other relevant competency training, as determined by VA CP with input from the ICRA team.
- 2. Submit training records of all such employees for approval before the start of work.
- 3. See Specification sections on Lead Paint and Asbestos for specifics on training expected for these areas.

1.2 STATEMENT OF BID ITEM(S)

A. ITEM I, GENERAL CONSTRUCTION: This project will be broken into phases and/or areas and bid will reflect specific work as described in the Invitation to Bidder(s). Work may have ongoing projects in adjoining area. Prior to start of work coordinate with COTR and party(s) doing work in adjoining areas to ensure cooperation and to avoid scheduling conflicts. Work in each area will include the demolition for and preparation needed for changes to existing. See Project Summary above.

1.3 SPECIFICATIONS AND DRAWINGS FOR CONTRACTOR

- A. AFTER AWARD OF CONTRACT, the VA will furnish the contractor with a CD containing the specifications and drawings.
- B. Sets of drawings may be made by the Contractor, at Contractor's expense, and distributed accordingly to the contractor's subcontractors as needed.
- C. Scope of work will be as defined in the Invitation to Bidder(s). Drawings show entire campus, typical conditions and details. It will be the responsibility of the bidder to review existing conditions and adjust to the particular area of work. Review changes and additions to "typical" with COTR.

1.4 CONSTRUCTION SECURITY REQUIREMENTS

A. Security Plan:

- 1. The security plan defines both physical and administrative security procedures that will remain effective for the entire duration of the project.
- 2. The General Contractor is responsible for assuring that all sub-contractors working on the project and their employees also comply with these regulations.

B. Security Procedures:

1. General Contractor's employees shall not enter the project site without appropriate badge. They may also be subject to inspection of their personal effects when entering or leaving the project site.

- 2. For working outside the "regular hours" as defined in the contract, The General Contractor shall give 3 days notice to the COTR so that security arrangements can be provided for the employees. This notice is separate from any notices required for utility shutdown described later in this section.
- 3. No photography of VA premises is allowed without written permission of the COTR.
- 4. VA reserves the right to close down or shut down the project site and order General Contractor's employees off the premises in the event of a national emergency. The General Contractor may return to the site only with the written approval of the COTR.

C. Key Control:

1. The General Contractor shall provide duplicate keys and lock combinations to the COTR for the purpose of security inspections of every area of project including tool boxes and parked machines and take any emergency action.

D. Document Control:

- 1. Before starting any work, the General Contractor/Sub Contractors shall submit an electronic security memorandum describing the approach to following goals and maintaining confidentiality of "sensitive information".
- 2. The General Contractor is responsible for safekeeping of all drawings, project manual and other project information. This information shall be shared only with those with a specific need to accomplish the project.
- 4. Certain documents, sketches, videos or photographs and drawings may be marked "Law Enforcement Sensitive" or "Sensitive Unclassified". Secure such information in separate containers and limit the access to only those who will need it for the project. Return the information to the COTR upon request.
- 5. These security documents shall not be removed or transmitted from the project site without the written approval of COTR.
- 6. All paper waste or electronic media such as CD's and diskettes shall be shredded and destroyed in a manner acceptable to the VA.
- 7. Notify COTR and Site Security Officer immediately when there is a loss or compromise of "sensitive information".
- 8. All electronic information shall be stored in specified location following VA standards and procedures using an Engineering Document Management Software (EDMS).
 - a. Security, access and maintenance of all project drawings, both scanned and electronic shall be performed and tracked through the EDMS system.
 - b. "Sensitive information" including drawings and other documents may be attached to e-mail provided all VA encryption procedures are followed.

F. Motor Vehicle Restrictions

- 1. Vehicle authorization request shall be required for any vehicle entering the site and such request shall be submitted 24 hours before the date and time of access. Access to loading docks shall be restricted to only picking up and dropping off materials and supplies. Contractor shall park in areas as designated by COTR.
- 2. Separate permits shall be issued for General Contractor and its employees for parking in designated areas only.

1.5 FIRE SAFETY

- A. Applicable Publications: Publications listed below form part of this Article to extent referenced. Publications are referenced in text by basic designations only.
 - 1. American Society for Testing and Materials (ASTM):
 E84-2008.....Surface Burning Characteristics of Building Materials
 - 2. National Fire Protection Association (NFPA):

10-2006	Standard for Portable Fire Extinguishers
30-2007	Flammable and Combustible Liquids Code
51B-2003	Standard for Fire Prevention During Welding, Cutting and
	Other Hot Work
70-2007	National Electrical Code
241-2004	Standard for Safeguarding Construction, Alteration, and

Demolition Operations
3. Occupational Safety and Health Administration (OSHA):

29 CFR 1926.......Safety and Health Regulations for Construction
Fire Safety Plan: Establish and maintain a fire protection program in accordance with 29
CFR 1926. Prior to start of work, prepare a plan detailing project-specific fire safety
measures, including periodic status reports, and submit to COTR and Facility Safety
Officer for review for compliance with contract requirements in accordance with Section
01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES Prior to any worker
for the contractor or subcontractors beginning work, they shall undergo a safety briefing
provided by the general contractor's competent person per OSHA requirements. This
briefing shall include information on the construction limits, VAMC safety guidelines,
means of egress, break areas, work hours, locations of restrooms, use of VAMC
equipment, etc. Documentation shall be provided to the COTR that individuals have
undergone contractor's safety briefing.

- C. Site and Building Access: Maintain free and unobstructed access to Facility emergency services and for fire, police and other emergency response forces in accordance with NFPA 241.
- D. Separate temporary facilities, such as trailers, storage sheds, and dumpsters, from existing buildings and new construction by distances in accordance with NFPA 241. For small facilities with less than 6 m (20 feet) exposing overall length, separate by 3m (10 feet).
- E. Temporary Construction Partitions: Install and maintain temporary construction partitions as needed or directed by COTR.
- F. Temporary Heating and Electrical: Install, use and maintain installations in accordance with 29 CFR 1926, NFPA 241 and NFPA 70.
- G. Means of Egress: Do not block exiting for occupied buildings, including paths from exits to roads. Minimize disruptions and coordinate with COTR and Facility Safety Officer.
- H. Egress Routes for Construction Workers: Maintain free and unobstructed egress. Inspect daily. Report findings and corrective actions weekly to COTR and Facility Safety Officer.
- I. Fire Extinguishers: Provide and maintain extinguishers in construction areas and temporary storage areas in accordance with 29 CFR 1926, NFPA 241 and NFPA 10.
- J. Flammable and Combustible Liquids: Store, dispense and use liquids in accordance with 29 CFR 1926, NFPA 241 and NFPA 30.

- K. Existing Fire Protection: Do not impair automatic sprinklers, smoke and heat detection, and fire alarm systems, except for portions immediately under construction, and temporarily for connections. Provide fire watch for impairments more than 4 hours in a 24-hour period. Request interruptions in accordance with Article, OPERATIONS AND STORAGE AREAS, and coordinate with COTR and Facility Safety Officer. All existing or temporary fire protection systems (fire alarms, sprinklers) located in construction areas shall be tested as coordinated with the COTR. Parameters for the testing and results of any tests performed shall be recorded by the medical center and copies provided to the COTR.
- L. Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with COTR. And obtain permits from COTR at least 48 hours in advance. Designate contractor's responsible project-site fire prevention program manager to permit hot work.
- M. Fire Hazard Prevention and Safety Inspections: Inspect entire construction areas weekly. Coordinate with, and report findings and corrective actions weekly to COTR and Facility Safety Officer .
- N. Smoking: Smoking is prohibited in and adjacent to construction areas inside existing buildings and additions under construction. In separate and detached buildings under construction, smoking is prohibited except in designated smoking rest areas.
- O. Dispose of waste and debris in accordance with NFPA 241. Remove from buildings daily.
- P. Perform other construction, alteration and demolition operations in accordance with 29 CFR 1926.
- Q. If required, submit documentation to the COTR that personnel have been trained in the fire safety aspects of working in areas with impaired structural or compartmentalization features.

1.6 OPERATIONS, TEMPORARY FACILITIES AND STORAGE AREAS

- A. The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the COTR. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.
- B. Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.
- C. The Contractor shall, under regulations prescribed by the COTR, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from

- damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.
- D. Working space and space available for storing materials shall as determined by the COTR.
- E. Workmen are subject to rules of Medical Center applicable to their conduct.
- F. Execute work so as to interfere as little as possible with normal functioning of Medical Center as a whole, including operations of utility services, fire protection systems and any existing equipment, and with work being done by others. Use of equipment and tools that transmit vibrations and noises through the building structure, are not permitted in buildings that are occupied, during construction, jointly by patients or medical personnel, and Contractor's personnel, except as permitted by COTR where required by limited working space.
 - 1. Do not store materials and equipment in other than assigned areas.
 - 2. Schedule delivery of materials and equipment to immediate construction working areas within buildings in use by Department of Veterans Affairs in quantities sufficient for not more than two workdays or as approved by the COTR. Provide unobstructed access to Medical Center areas required to remain in operation.
 - 3. Where access by Medical Center personnel to vacated portions of buildings is not required, storage of Contractor's materials and equipment will be permitted subject to fire and safety requirements.
- G. Utilities Services: Where necessary to cut existing pipes, electrical wires, conduits, cables, etc., of utility services, or of fire protection systems or communications systems (except telephone), they shall be cut and capped at suitable places where shown; or, in absence of such indication, where directed by COTR. All such actions shall be coordinated with the Utility Company involved:
 - 1. Whenever it is required that a connection fee be paid to a public utility provider for new permanent service to the construction project, for such items as water, sewer, electricity, gas or steam, payment of such fee shall be the responsibility of the Government and not the Contractor.
- H. Phasing: To insure such executions, Contractor shall furnish the COTR with a schedule of approximate phasing dates on which the Contractor intends to accomplish work in each specific area of site, building or portion thereof.
- I. Owner occupation and use of the space. Will require coordination and cooperation between the Contractor and the VA staff at all times.
- J. Construction Fence: Before construction operations begin, should Contractor determine access from exterior will be needed, he shall provide a chain link or other approved construction barrier, 2100 mm (seven feet) minimum height, around the construction area indicated on the drawings. Provide gates as required for access with necessary hardware, including hasps and padlocks. Fasten fence fabric to terminal posts with tension bands and to line posts and top and bottom rails with tie wires spaced at maximum 15 inches. Bottom of fences shall extend to one inch above grade. Remove the fence upon completion of all work items. All pedestrian areas including entrances required for ingress/egress and as shown on the drawings shall be protected from overhead risks.

- K. When a building or portion there of is turned over to Contractor, Contractor shall accept entire responsibility therefore.
 - 1. Contractor shall maintain a minimum temperature of 4 degrees C (40 degrees F) at all times, except as otherwise specified.
 - 2. Contractor shall maintain in operating condition existing fire protection and alarm equipment. In connection with fire alarm equipment, Contractor shall make arrangements for pre-inspection of site with Fire Department or Company (Department of Veterans Affairs or municipal) whichever will be required to respond to an alarm from Contractor's employee or watchman.
- L. Utilities Services: This project does not involve utilities in any way. Take care to maintain existing utility services at all times.
 - 1. No utility service such as water, gas, steam, sewers or electricity, or fire protection systems and communications systems may be interrupted without prior approval of COTR.
 - 2. Contractor shall submit a request to interrupt any such services to COTR, in writing, 48 hours in advance of proposed interruption. Request shall state reason, date, exact time of, and approximate duration of such interruption.
 - 3. Contractor will be advised (in writing) of approval of request, or of which other date and/or time such interruption will cause least inconvenience to operations of Medical Center. Interruption time approved by Medical Center may occur at other than Contractor's normal working hours.
 - 4. In case of a contract construction emergency, service will be interrupted on approval of COTR. Such approval will be confirmed in writing as soon as practical.
- M. Abandoned Lines: All service lines such as wires, cables, conduits, ducts, pipes and the like, and their hangers or supports, which are to be abandoned but are not required to be entirely removed, shall be sealed, capped or plugged. The lines shall not be capped in finished areas, but shall be removed and sealed, capped or plugged in ceilings, within furred spaces, in unfinished areas, or within walls or partitions; so that they are ompletely behind the finished surfaces.
- N. To minimize interference of construction activities with flow of campus traffic, comply with the following:
 - 1. Keep roads, walks and entrances to grounds, to parking and to occupied areas of buildings clear of construction materials, debris and standing construction equipment and vehicles.
 - 2. If the Contractor elects to modify or provide temporary road and access to the project, method and scheduling of required cutting, altering and removal of existing roads, walks and entrances must be approved by the COTR.
- O. Coordinate the work for this contract with other construction operations as directed by COTR. This includes the scheduling of traffic and the use of roadways, as specified in Article, USE OF ROADWAYS.
- P. Portions of the buildings will be occupied during the performance of work under this contract. Prior to the start of work the VA will verify what buildings or portion thereof are occupied and provide this information to the contractor.

1.7 USE OF EXISTING BUILDINGS, ALTERATIONS

- A. Survey: Before any work is started, the Contractor shall make a thorough survey with the COTR and a representative of VA Supply Service, of buildings areas of buildings in which alterations occur and areas which are anticipated routes of access, and furnish a report, signed by all three, to the Contracting Officer. This report shall list by rooms and spaces:
 - 1. Existing condition and types of resilient flooring, doors, windows, walls and other surfaces not required to be altered throughout affected areas of building.
 - 2. Existence and conditions of items such as plumbing, fixtures and accessories, electrical fixtures, equipment, venetian blinds, shades, etc., required by drawings to be either reused or relocated, or both.
 - 3. Shall note any discrepancies between drawings and existing conditions at site.
 - 4. Shall designate areas for working space, materials storage and routes of access to areas within buildings where alterations occur and which have been agreed upon by Contractor and COTR.
- B. Any items required by drawings to be either reused or relocated or both, found during this survey to be nonexistent, or in opinion of COTR to be in such condition that their use is impossible or impractical, shall be furnished and/or replaced by Contractor with new items in accordance with specifications which will be furnished by Government. Provided the contract work is changed by reason of this subparagraph B, the contract will be modified accordingly, under provisions of clause entitled "DIFFERING SITE CONDITIONS" (FAR 52.236-2) and "CHANGES" (FAR 52.243-4 and VAAR 852.236-88).
- C. Re-Survey: Thirty days before expected partial or final inspection date, the Contractor and COTR together shall make a thorough re-survey of the areas of buildings involved. They shall furnish a report on conditions then existing, of resilient flooring, doors, windows, walls and other surfaces as compared with conditions of same as noted in first condition survey report:
 - 1. Re-survey report shall also list any damage caused by Contractor to such flooring and other surfaces, despite protection measures; and, will form basis for determining extent of repair work required of Contractor to restore damage caused by Contractor's workmen in executing work of this contract.
- D. Protection: Provide the following protective measures:
 - 1. Protected against water infiltration. In case of leaks, they shall be repaired immediately upon discovery.
 - 2. Temporary protection against damage for portions of existing structures and grounds where work is to be done, materials handled and equipment moved and/or relocated.
 - 3. Protection of interior of existing structures at all times, from damage, dust and weather inclemency. Wherever work is performed, floor surfaces that are to remain in place shall be adequately protected prior to starting work, and this protection shall be maintained intact until all work in the area is completed.

E. Final Cleanup:

1. Upon completion of project, or as work progresses, remove all construction debris from all parts of the building that have been part of the construction.

2. Perform HEPA vacuum cleaning of all surfaces in the buildings affected by construction. This includes walls, ceilings, cabinets, furniture (built-in or free standing), partitions, flooring, etc.

1.8 INFECTION PREVENTION MEASURES (DUST CONTROL AND VENTILATION).

- A. Implement the requirements of VAMC's Infection Control Risk Assessment (ICRA) team. ICRA Group may monitor dust in the vicinity of the construction work and require the Contractor to take corrective action immediately if the safe levels are exceeded.
- B. Establish and maintain a dust control program as part of the contractor's infection preventive measures in accordance with the guidelines provided by ICRA Group. Prior to start of work, prepare a plan detailing project-specific dust protection measures, including periodic status reports, and submit to COTR for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

C. NOT USED

- D. In general, following preventive measures shall be adopted during construction to keep down dust and prevent mold.
 - 1. Dampen debris to keep down dust and provide temporary construction partitions in existing structures where directed by COTR. Blank off ducts and diffusers to prevent circulation of dust into occupied areas during construction.
 - 2. Do not perform dust producing tasks within occupied areas without the approval of the COTR. For construction in any areas that will remain jointly occupied by the medical Center and Contractor's workers, the Contractor shall:
 - a. Provide dust proof temporary drywall construction barriers to completely separate construction from the operational areas of the facility in order to contain dirt debris and dust. Barriers shall be sealed and made presentable on non-construction, occupied side. Install a self-closing rated door in a metal frame, commensurate with the partition, to allow worker access. Maintain negative air at all times. A fire retardant polystyrene, 6-mil thick or greater plastic barrier meeting local fire codes may be used where dust control is the only hazard, and an agreement is reached with the COTR.
 - b. HEPA filtration is required where the exhaust dust may reenter the breathing zone. Contractor shall verify that construction exhaust to exterior is not reintroduced to the remainder of the facility through intake vents, or building openings. Install HEPA (High Efficiency Particulate Accumulator) filter vacuum system rated at 95% capture of 0.3 microns including pollen, mold spores and dust particles. Insure continuous negative air pressures occurring within the work area. HEPA filters should have ASHRAE 85 or other prefilter to extend the useful life of the HEPA. Provide both primary and secondary filtrations units. Exhaust hoses shall be heavy duty, flexible steel reinforced and exhausted so that dust is not reintroduced to the facility.
 - c. Adhesive Walk-off/Carpet Walk-off Mats, minimum 600mm x 900mm (24" x 36"), shall be used at all interior transitions from the construction area to occupied facility area. These mats shall be changed as often as required to maintain clean work areas directly outside construction area at all times.

- d. Vacuum and wet mop all transition areas from construction to occupied areas at the end of each workday. Vacuum shall utilize HEPA filtration. Maintain surrounding area frequently. Remove debris as they are created. Transport these outside the construction area in containers with tightly fitting lids.
- e. The contractor shall not haul debris through patient-care areas without prior approval of the COTR. When, approved, debris shall be hauled in enclosed dust proof containers or wrapped in plastic and sealed with duct tape. No sharp objects should be allowed to cut through the plastic. Wipe down the exterior of the containers with a damp rag to remove dust. All equipment, tools, material, etc. transported through occupied areas shall be made free from dust and moisture by vacuuming and wipe down.
- f. Using a HEPA vacuum, clean inside the barrier and vacuum ceiling tile prior to replacement. Any ceiling access panels opened for investigation beyond sealed areas shall be sealed immediately when unattended.

E. Final Cleanup:

- 1. Upon completion of project, or as work progresses, remove all construction debris from above ceiling, vertical shafts and utility chases that have been part of the construction.
- 2. Perform HEPA vacuum cleaning of all surfaces in the construction area. This includes walls, ceilings, cabinets, furniture (built-in or free standing), partitions, flooring, etc.
- 3. All new air ducts shall be cleaned prior to final inspection.

1.9 DISPOSAL AND RETENTION

COTR may tag items to be removed and stored.

- A. Materials and equipment accruing from work removed and from demolition, shall be disposed of as follows:
 - 1. Reserved items, which are to remain property of the Government, are identified by attached tags or noted on drawings or in specifications as items to be stored. Items that remain property of the Government shall be removed or dislodged from present locations in such a manner as to prevent damage, which would be detrimental to re-installation and reuse. Store such items where directed by COTR.
 - 2. Items not reserved shall become property of the Contractor and be removed by Contractor from Medical Center.
 - 4. Items of portable equipment and furnishings located in rooms and spaces in which work is to be done under this contract shall remain the property of the Government. When rooms and spaces are vacated by the Department of Veterans Affairs during the alteration period, such items which are NOT required by drawings and specifications to be either relocated or reused will be removed by the Government in advance of work to avoid interfering with Contractor's operation.

1.10 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS

It is anticipated that access to a project area for personnel, equipment and materials could require use of exterior paths, driveways and streets. Therein:

- A. The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the COTR.
- B. The Contractor shall protect from damage all existing improvements and utilities at or near the work site and on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the COTR may have the necessary work performed and charge the cost to the Contractor.
- C. Refer to Section 01 57 19, TEMPORARY ENVIRONMENTAL CONTROLS, for additional requirements on protecting vegetation, soils and the environment. Refer to Articles, "Alterations", "Restoration", and "Operations and Storage Areas" for additional instructions concerning repair of damage to structures and site improvements.
- D. Refer to FAR clause 52.236-7, "Permits and Responsibilities," which is included in General Conditions. If a National Pollutant Discharge Elimination System (NPDES) permit is required for this project, the Contractor is considered an "operator" under the permit and has extensive responsibility for compliance with permit requirements. VA will make the permit application available at the (appropriate medical center) office. The apparent low bidder, contractor and affected subcontractors shall furnish all information and certifications that are required to comply with the permit process and permit requirements. Many of the permit requirements will be satisfied by completing construction as shown and specified. Some requirements involve the Contractor's method of operations and operations planning and the Contractor is responsible for employing best management practices. The affected activities often include, but are not limited to the following:
 - Designating areas for equipment maintenance and repair;
 - Providing waste receptacles at convenient locations and provide regular collection of wastes;
 - Locating equipment wash down areas on site, and provide appropriate control of wash-waters;
 - Providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials; and
 - Providing adequately maintained sanitary facilities.

1.11 RESTORATION

- A. Remove, cut, alter, replace, patch and repair existing work as necessary to install new work. Except as otherwise shown or specified, do not cut, alter or remove any structural work, and do not disturb any ducts, plumbing, steam, gas, or electric work without approval of the COTR. Existing work to be altered or extended and that is found to be defective in any way, shall be reported to the COTR before it is disturbed. Materials and workmanship used in restoring work, shall conform in type and quality to that of original existing construction, except as otherwise shown or specified.
- B. Upon completion of contract, deliver work complete and undamaged. Existing work (walls, ceilings, partitions, floors, mechanical and electrical work, lawns, paving, roads, walks, etc.) disturbed or removed as a result of performing required new work, shall be patched, repaired, reinstalled, or replaced with new work, and refinished and left in as good condition as existed before commencing work.
- C. At Contractor's own expense, Contractor shall immediately restore to service and repair any damage caused by Contractor's workmen to existing piping and conduits, wires, cables, etc., of utility services or of fire protection systems and communications systems (including telephone) which are indicated on drawings and which are not scheduled for discontinuance or abandonment.
- D. Expense of repairs to such utilities and systems not shown on drawings or locations of which are unknown will be covered by adjustment to contract time and price in accordance with clause entitled "CHANGES" (FAR 52.243-4 and VAAR 852.236-88) and "DIFFERING SITE CONDITIONS" (FAR 52.236-2) of Section 00 72 00, GENERAL CONDITIONS.

1.12 -1.14 NOT USED

1.15 AS BUILT DRAWINGS

- A. The contractor shall maintain two full size sets of As-Built drawings, which will be kept current during construction of the project, to include all contract changes, modifications and clarifications.
- B. All variations shall be shown in the same general detail as used in the contract drawings. To insure compliance, As Built drawings shall be made available for the COTR's review, as often as requested.
- C. Contractor shall deliver two approved completed sets of Record drawings to the COTR within 15 calendar days after each completed phase and after the acceptance of the project by the Government. Partial drawing sets will not be accepted.
- D. Paragraphs A, B, & C shall also apply to all shop drawings.

1.16 USE OF ROADWAYS

A. For hauling, use only established public roads and roads on Medical Center property and, when authorized by the COTR, such temporary roads which are necessary in the performance of contract work. Temporary roads shall be constructed by the Contractor at

- Contractor's expense. When necessary to cross curbing, sidewalks, or similar construction, they must be protected by well-constructed bridges.
- B. When new permanent roads are to be a part of this contract, Contractor may construct them immediately for use to facilitate building operations. These roads may be used by all who have business thereon within zone of building operations.
- C. When certain buildings (or parts of certain buildings) are required to be completed in advance of general date of completion, all roads leading thereto must be completed and available for use at time set for completion of such buildings or parts thereof.

1.17 NOT USED

1.18 TEMPORARY USE OF MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Use of mechanical and electrical systems to provide heat, ventilation, plumbing, light and power will be permitted subject to compliance with the following provisions:
 - 1. Permission to use each unit or system must be given by COTR. Equipment must be used without impact on remainder of facility, or the COTR will withdraw permission for use of the equipment.

1.19 - 1.20 NOT USED

1.21 TEMPORARY TOILETS

- A. General Contractor shall provide, where directed, for use of all Construction workmen, ample temporary sanitary toilet accommodations with suitable sewer and water connections; or, when approved by COTR provide suitable dry closets where directed. Keep such places clean and free from flies, and all connections and appliances connected therewith are to be removed prior to completion of the contract and the premises left perfectly clean and as found at the start of this work.
- B. Contractor may have for use of Contractor's workmen, such toilet accommodations as may be assigned to Contractor by COTR. Contractor shall keep such places clean and be responsible for any damage done thereto by Contractor's workmen. Failure to maintain satisfactory condition in toilets will deprive Contractor of the privilege to use such toilets.

1.22 AVAILABILITY AND USE OF UTILITY SERVICES

- A. The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified herein. The amount to be paid by the Contractor for chargeable electrical services shall be the prevailing rates charged to the Government. The Contractor shall carefully conserve any utilities furnished without charge.
- B. The Contractor, at Contractor's expense and in a workmanlike manner satisfactory to the COTR, shall install and maintain all necessary temporary connections and distribution lines, Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

- C. Contractor shall install meters at Contractor's expense and furnish the Medical Center a monthly record of the Contractor's usage of electricity as hereinafter specified.
- D. Electricity (for Construction and Testing): Furnish all temporary electric services.
 - 1. Obtain electricity by connecting to the Medical Center electrical distribution system. The Contractor shall meter and pay for electricity required for electric cranes and hoisting devices, electrical welding devices and any electrical heating devices providing temporary heat. Electricity for all other uses is available at no cost to the Contractor.
- E. Water (for Construction and Testing): General Contractor to coordinate for temporary water service.
 - 1. Obtain water by connecting to the Medical Center water distribution system. Provide reduced pressure backflow preventer at each connection. Water is available at no cost to the Contractor.
 - 2. Maintain connections, pipe, fittings and fixtures and conserve water-use so none is wasted. Failure to stop leakage or other wastes will be cause for revocation (at COTR discretion) of use of water from Medical Center's system.

1.23 -1.24 NOT USED

1.25 INSTRUCTIONS

- A. Contractor shall furnish Maintenance, cleaning and replacement instructions manuals and verbal instructions when required by the various sections of the specifications and as hereinafter specified.
- B. Manuals: Maintenance (four copies each) for each product and finish shall be delivered to the COTR coincidental with the delivery of the material to the job site.

1.26 - 1.28 NOT USED

1.29 CONSTRUCTION SIGN

- A. Provide construction Signage per COTR instruction, where directed by the COTR, and or Safety Officer.
- B. Paint all surfaces of sign and posts two coats of white gloss paint. Border and letters shall be of black gloss paint, except project title which shall be blue gloss paint.
- C. Maintain sign and remove it when directed by the COTR.

1.30 SAFETY SIGN

- A. Provide Safety Signage per COTR instruction, where directed by COTR and or VA Safety Officer.
- C. Maintain sign and remove it when directed by COTR or VA Safety Officer.

1.31 PHOTOGRAPHIC DOCUMENTATION

A. During the construction period, and at selected milestones through completion, furnish COTR, Department of Veterans Affairs with digital images via e-mail attachment or on Compact Disc (CD).

- B. Photography at this facility is to be done only under the rules established and as directed by the COTR
- C. Photographer used for this work shall meet the following qualifications:
 - 1. Immediately after award of Bid demonstrable ability of photographer to service this project on a timely basis and provide photos to COTR on a timely basis.
 - 2. Provide a representative portfolio of past projects of similar type, size, duration and complexity as this Project to the COTR for review and approval of photographer.
- D. Photographic documentation:
 - 1. Before construction, record existing conditions of the building project area as well of path of travel to and from area for delivery of supplies and materials, egress of workers and removal of debris.
 - 2. Photo construction progress for all trades, tracked at pre-determined intervals. Interior Progressions shall track interior improvements beginning with completion of demolition, then stud work, and continuing until Project completion.
 - 3. As-built conditions of existing mechanical, electrical, plumbing and all other systems shall be documented prior to closing and sheet rock or dry wall installation. This process shall include all finished systems located in the walls and ceilings.
 - 4. As-built finished conditions of the project area including floors, ceilings, windows, doors and walls shall be documented prior to occupancy, as directed by the COTR.
- E. Contractor shall provide all on-line domain/web hosting, security measures, and redundant server back-up of the documentation.
- F. Contractor shall provide technical support related to using the system or service.

1.33 HISTORIC PRESERVATION

Where the Contractor or any of the Contractor's employees, prior to, or during the construction work, are advised of or discover any possible archeological, historical and/or cultural resources, the Contractor shall immediately notify the COTR verbally, and then with a written follow up.

SECTION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- 1-1. Refer to Articles titled SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FAR 52.236-21) and, SPECIAL NOTES (VAAR 852.236-91), in Section 00 72 00, GENERAL CONDITIONS.
- 1-2. For the purposes of this contract, samples, test reports, certificates, and manufacturers' literature and data shall also be subject to the previously referenced requirements. The following text refers to all items collectively as SUBMITTALS.
- 1-3. Submit for approval, all of the items specifically mentioned under the separate sections of the specification, with information sufficient to evidence full compliance with contract requirements. Materials, fabricated articles and the like to be installed in permanent work shall equal those of approved submittals. After an item has been approved, no change in brand or make will be permitted unless:
 - A. Satisfactory written evidence is presented to, and approved by Contracting Officer, that manufacturer cannot make scheduled delivery of approved item or;
 - B. Item delivered has been rejected and substitution of a suitable item is an urgent necessity or;
 - C. Other conditions become apparent which indicates approval of such substitute item to be in best interest of the Government.
- 1-4. Submittals shall be submitted ten (10) working days, excluding federal holidays, prior to proceeding with that portion of the contract work, which requires submittal approval. Schedule delivery of submissions to assure adequate lead-time for procurement of contract required items. Delays attributable to untimely and rejected submittals will not serve as a basis for extending contract time for completion. Partial submittals will not be accepted unless authorized by the Contracting Officer or COTR.
- 1-5. Architect-Engineer will review submittals for compliance with contract requirements, and action thereon will be taken by COTR on behalf of the Contracting Officer.
- 1-6. Upon receipt of submittals, Architect-Engineer will assign a file number thereto. Contractor, in any subsequent correspondence, shall refer to this file and identification number to expedite replies relative to previously approved or disapproved submittals.
- 1-7. The Government reserves the right to require additional submittals, whether or not particularly mentioned in this contract. If additional submittals beyond those required by the contract are furnished pursuant to request therefor by Contracting Officer, adjustment in contract price and time will be made in accordance with Articles titled CHANGES (FAR 52.243-4) and CHANGES SUPPLEMENT (VAAR 852.236-88) of the GENERAL CONDITIONS.
- 1-8. Schedules where called for in specifications and shown on shop drawings shall be submitted for use and information of Department of Veterans Affairs and Architect-Engineer. However, the Contractor shall assume responsibility for coordinating and verifying schedules. The Contracting Officer and Architect-Engineer assumes no

- responsibility for checking schedules or layout drawings for exact sizes, exact numbers and detailed positioning of items.
- 1-9. Submittals must be submitted by Contractor only and all items shall be delivered at the Contractor's expense. The Government and Architect assume no responsibility for checking quantities or exact numbers included in such submittals. All submittals shall be delivered in electronic format unless otherwise approved by the COTR.
 - A. Submit samples required for finishes, in quadruplicate. Submit other samples in single units unless otherwise specified. Submit shop drawings, schedules, manufacturers' literature and data, and certificates in single units, except where a greater number is specified.
 - B. Submittals will receive consideration only when covered by a transmittal letter signed by Contractor. Letter shall contain the list of items, name of VA Facility, name of Contractor, contract number, applicable specification paragraph numbers, applicable drawing numbers (and other information required for exact identification of location for each item), manufacturer and brand, ASTM or Federal Specification Number (if any) and such additional information as may be required by specifications for particular item being furnished. In addition, catalogs shall be marked to indicate specific items submitted for approval.
 - 1. A copy of letter must be enclosed with items, and any items received without identification letter will be considered "unclaimed goods" and held for a limited time only.
 - 2. Each sample, certificate, manufacturers' literature and data shall be labeled to indicate the name and location of the VA Facility, name of Contractor, manufacturer, brand, contract number and ASTM or Federal Specification Number as applicable and location(s) on project.
 - 3. Required certificates shall be signed by an authorized representative of manufacturer or supplier of material, and by Contractor.
 - C. Not Used
 - D. If submittal samples have been disapproved, resubmit new samples as soon as possible after notification of disapproval. Such new samples shall be marked "Resubmitted Sample" in addition to containing other previously specified information required on label and in transmittal letter.
 - Approved samples will be kept on file by the COTR at the site until completion of contract, at which time such samples will be delivered to Contractor as Contractor's property. Where noted in technical sections of specifications, approved samples in good condition may be used in their proper locations in contract work. At completion of contract, samples that are not approved will be returned to Contractor only upon request and at Contractor's expense. Such request should be made prior to completion of the contract. Disapproved samples that are not requested for return by Contractor will be discarded after completion of contract.
 - F. Submittal drawings (shop, erection or setting drawings) and schedules, required for work of various trades, shall be checked before submission by technically qualified employees of Contractor for accuracy, completeness and compliance

with contract requirements. These drawings and schedules shall be stamped and signed by Contractor certifying to such check.

- 1. For each drawing required, submit one reproducible electronic copy.
- 2. All electronic documents shall be created at 1:1 scale to allow reproduction at full size.
- 3. Each drawing shall have marked thereon, proper descriptive title, including VA Facility location, project number, manufacturer's number, reference to contract drawing number, detail Section Number, and Specification Section Number.
- 4. A space 120 mm by 125 mm (4-3/4 by 5 inches) shall be reserved on each drawing to accommodate approval or disapproval stamp.
- 5. Submit hard copy drawings, rolled within a mailing tube or document envelope, fully protected and unfolded for shipment.
- 6. One electronic copy of approved or disapproved shop drawings will be forwarded to Contractor.
- 7. When work is directly related and involves more than one trade, shop drawings shall be submitted to Architect-Engineer under one cover when so directed by COTR.
- 1-10. When directed by COTR, samples shop drawings, test reports, certificates and manufacturers' literature and data, shall be submitted for approval to

ADW Architects 1105 Siskiyou Blvd P.O. Box 1348 Ashland, Oregon 97520

1-11. At the time of transmittal to the Architect-Engineer, the Contractor shall also send a copy of the complete submittal directly to the COTR.

SECTION 01 42 19 REFERENCE STANDARDS

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies the availability and source of references and standards specified in the project manual under paragraphs APPLICABLE PUBLICATIONS and/or shown on the drawings.

1.2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE GSA INDEX OF FEDERAL SPECIFICATIONS, STANDARDS AND COMMERCIAL ITEM **DESCRIPTIONS FPMR PART 101-29 (FAR 52.211-1) (AUG 1998)**

- A. The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29 and copies of specifications, standards, and commercial item descriptions cited in the solicitation may be obtained for a fee by submitting a request to – GSA Federal Supply Service, Specifications Section, Suite 8100, 470 East L'Enfant Plaza, SW, Washington, DC 20407, Telephone (202) 619-8925, Facsimile (202) 619-8978.
- B. If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (a) of this provision. Additional copies will be issued for a fee.

1.3 AVAILABILITY FOR EXAMINATION OF SPECIFICATIONS NOT LISTED IN THE GSA INDEX OF FEDERAL SPECIFICATIONS, STANDARDS AND COMMERCIAL ITEM DESCRIPTIONS (FAR 52.211-4) (JUN 1988)

The specifications and standards cited in this solicitation can be examined at the following location:

DEPARMENT OF VETERANS AFFAIRS

Office of Construction & Facilities Management Facilities Quality Service (00CFM1A) 811 Vermont Avenue, NW - Room 462 Washington, DC 20420 Telephone Number: (202) 461-8217 or 461-8292

Between 9:00 AM - 3:00 PM

1.4 AVAILABILITY OF SPECIFICATIONS NOT LISTED IN THE GSA INDEX OF FEDERAL SPECIFICATIONS, STANDARDS AND COMMERCIAL ITEM **DESCRIPTIONS (FAR 52.211-3) (JUN 1988)**

The specifications cited in this solicitation may be obtained from the associations or organizations listed below.

AA Aluminum Association Inc.

http://www.aluminum.org

AABC Associated Air Balance Council

http://www.aabchq.com

AAMA American Architectural Manufacturer's Association

http://www.aamanet.org

AAN American Nursery and Landscape Association

http://www.anla.org

AASHTO American Association of State Highway and Transportation Officials

http://www.aashto.org

AATCC American Association of Textile Chemists and Colorists

http://www.aatcc.org

ACGIH American Conference of Governmental Industrial Hygienists

http://www.acgih.org

ACI American Concrete Institute

http://www.aci-int.net

ACPA American Concrete Pipe Association

http://www.concrete-pipe.org

ACPPA American Concrete Pressure Pipe Association

http://www.acppa.org

ADC Air Diffusion Council

http://flexibleduct.org

AGA American Gas Association

http://www.aga.org

AGC Associated General Contractors of America

http://www.agc.org

AGMA American Gear Manufacturers Association, Inc.

http://www.agma.org

AHAM Association of Home Appliance Manufacturers

http://www.aham.org

AISC American Institute of Steel Construction

http://www.aisc.org

AISI American Iron and Steel Institute

http://www.steel.org

AITC American Institute of Timber Construction

http://www.aitc-glulam.org

AMCA Air Movement and Control Association, Inc.

http://www.amca.org

ANLA American Nursery & Landscape Association

http://www.anla.org

ANSI American National Standards Institute, Inc.

http://www.ansi.org

APA The Engineered Wood Association

http://www.apawood.org

ARI Air-Conditioning and Refrigeration Institute

http://www.ari.org

ASAE American Society of Agricultural Engineers

http://www.asae.org

ASCE American Society of Civil Engineers

http://www.asce.org

ASHRAE American Society of Heating, Refrigerating, and

Air-Conditioning Engineers

http://www.ashrae.org

ASME American Society of Mechanical Engineers

http://www.asme.org

ASSE American Society of Sanitary Engineering

http://www.asse-plumbing.org

ASTM American Society for Testing and Materials

http://www.astm.org

AWI Architectural Woodwork Institute

http://www.awinet.org

AWS American Welding Society

http://www.aws.org

AWWA American Water Works Association

http://www.awwa.org

BHMA Builders Hardware Manufacturers Association

http://www.buildershardware.com

BIA Brick Institute of America

http://www.bia.org

CAGI Compressed Air and Gas Institute

http://www.cagi.org

CGA Compressed Gas Association, Inc.

http://www.cganet.com

CI The Chlorine Institute, Inc.

http://www.chlorineinstitute.org

CISCA Ceilings and Interior Systems Construction Association

http://www.cisca.org

CISPI Cast Iron Soil Pipe Institute

http://www.cispi.org

CLFMI Chain Link Fence Manufacturers Institute

http://www.chainlinkinfo.org

CPMB Concrete Plant Manufacturers Bureau

http://www.cpmb.org

CRA California Redwood Association

http://www.calredwood.org

CRSI Concrete Reinforcing Steel Institute

http://www.crsi.org

CTI Cooling Technology Institute

http://www.cti.org

DHI Door and Hardware Institute

http://www.dhi.org

EGSA Electrical Generating Systems Association

http://www.egsa.org

EEI Edison Electric Institute

http://www.eei.org

EPA Environmental Protection Agency

http://www.epa.gov

ETL Testing Laboratories, Inc.

http://www.et1.com

FAA Federal Aviation Administration

http://www.faa.gov

FCC Federal Communications Commission

http://www.fcc.gov

FPS The Forest Products Society

http://www.forestprod.org

GANA Glass Association of North America

http://www.cssinfo.com/info/gana.html/

FM Factory Mutual Insurance

http://www.fmglobal.com

GA Gypsum Association

http://www.gypsum.org

GSA General Services Administration

http://www.gsa.gov

HI Hydraulic Institute

http://www.pumps.org

HPVA Hardwood Plywood & Veneer Association

http://www.hpva.org

ICBO International Conference of Building Officials

http://www.icbo.org

ICEA Insulated Cable Engineers Association Inc.

http://www.icea.net

\ICAC Institute of Clean Air Companies

http://www.icac.com

IEEE Institute of Electrical and Electronics Engineers

http://www.ieee.org\

IMSA International Municipal Signal Association

http://www.imsasafety.org

IPCEA Insulated Power Cable Engineers Association
NBMA Metal Buildings Manufacturers Association

http://www.mbma.com

MSS Manufacturers Standardization Society of the Valve and Fittings Industry Inc.

http://www.mss-hq.com

NAAMM National Association of Architectural Metal Manufacturers

http://www.naamm.org

NAPHCC Plumbing-Heating-Cooling Contractors Association

http://www.phccweb.org.org

NBS National Bureau of Standards

See - NIST

NBBPVI National Board of Boiler and Pressure Vessel Inspectors

http://www.nationboard.org

NEC National Electric Code

See - NFPA National Fire Protection Association

NEMA National Electrical Manufacturers Association

http://www.nema.org

NFPA National Fire Protection Association

http://www.nfpa.org

NHLA National Hardwood Lumber Association

http://www.natlhardwood.org

NIH National Institute of Health

http://www.nih.gov

NIST National Institute of Standards and Technology

http://www.nist.gov

NLMA Northeastern Lumber Manufacturers Association, Inc.

http://www.nelma.org

NPA National Particleboard Association

18928 Premiere Court Gaithersburg, MD 20879

(301) 670-0604

NSF National Sanitation Foundation

http://www.nsf.org

NWWDA Window and Door Manufacturers Association

http://www.nwwda.org

OSHA Occupational Safety and Health Administration

Department of Labor http://www.osha.gov

PCA Portland Cement Association

http://www.portcement.org

PCI Precast Prestressed Concrete Institute

http://www.pci.org

PPI The Plastic Pipe Institute

http://www.plasticpipe.org

PEI Porcelain Enamel Institute, Inc.

http://www.porcelainenamel.com

PTI Post-Tensioning Institute

http://www.post-tensioning.org

RFCI The Resilient Floor Covering Institute

http://www.rfci.com

RIS Redwood Inspection Service

See - CRA

RMA Rubber Manufacturers Association, Inc.

http://www.rma.org

SCMA Southern Cypress Manufacturers Association

http://www.cypressinfo.org

SDI Steel Door Institute

http://www.steeldoor.org

IGMA Insulating Glass Manufacturers Alliance

http://www.igmaonline.org

SJI Steel Joist Institute

http://www.steeljoist.org

SMACNA Sheet Metal and Air-Conditioning Contractors

National Association, Inc. http://www.smacna.org

SSPC The Society for Protective Coatings

http://www.sspc.org

STI Steel Tank Institute

http://www.steeltank.com

SWI Steel Window Institute

http://www.steelwindows.com

TCA Tile Council of America, Inc.

http://www.tileusa.com

TEMA Tubular Exchange Manufacturers Association

http://www.tema.org

TPI Truss Plate Institute, Inc.

583 D'Onofrio Drive: Suite 200

Madison, WI 53719 (608) 833-5900

UBC The Uniform Building Code

See ICBO

UL Underwriters' Laboratories Incorporated

http://www.ul.com

ULC Underwriters' Laboratories of Canada

http://www.ulc.ca

WCLIB West Coast Lumber Inspection Bureau

6980 SW Varns Road, P.O. Box 23145

Portland, OR 97223 (503) 639-0651

WRCLA Western Red Cedar Lumber Association

P.O. Box 120786

New Brighton, MN 55112

(612) 633-4334

WWPA Western Wood Products Association

http://www.wwpa.org

SECTION 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies the control of environmental pollution and damage that the Contractor must consider for air, water, and land resources. It includes management of visual aesthetics, noise, solid waste, radiant energy as well as other pollutants and resources encountered or generated by the Contractor. The Contractor is obligated to consider specified control measures with the costs included within the various contract items of work.
- B. Environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which:
 - 1. Adversely effect human health or welfare,
 - 2. Unfavorably alter ecological balances of importance to human life,
 - 3. Not Used
 - 4. Degrade the utility of the environment for aesthetic, cultural, and historical purposes.
- C. Definitions of Pollutants:
 - 1. Chemical Waste: Not Used
 - 2. Debris: Combustible and noncombustible wastes, such as waste materials resulting from construction or maintenance and repair work.
 - 3. Sediment: Not Used.
 - 4. Solid Waste: Rubbish, debris, garbage, and other discarded solid materials.
 - 5. Surface Discharge: Not Used
 - 6. Rubbish: Combustible and noncombustible wastes such as paper, boxes, glass and crockery, metal and lumber scrap, and construction debris.
 - 7. Sanitary Wastes: Not Used

1.2 QUALITY CONTROL

- A. Establish and maintain quality control for the environmental protection of all items set forth herein.
- B. Record on daily reports any problems in complying with laws, regulations, and ordinances. Note any corrective action taken.

1.3 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
- B. U.S. National Archives and Records Administration (NARA): 33 CFR 328......Definitions

1.4 SUBMITTALS

- A. In accordance with Section, 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES, furnish the following:
 - 1. Environmental Protection Plan: After the contract is awarded and prior to the commencement of the work, the Contractor shall meet with the COTR to discuss the proposed Environmental Protection Plan and to develop mutual understanding relative to details of environmental protection. Not more than 20 days after the meeting, the Contractor shall prepare and submit to the COTR for approval, a written and/or graphic Environmental Protection Plan including, but not limited to, the following:
 - a. Name(s) of person(s) within the Contractor's organization who is (are) responsible for ensuring adherence to the Environmental Protection Plan.
 - b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste, if any, to be removed from the site.
 - c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
 - d. Description of the Contractor's environmental protection personnel training program.
 - e. A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control, noise control and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations, and permits.
 - f. Methods for protection of features to be preserved within authorized work areas including noise, air quality, historical, and cultural resources.
 - g. Procedures to provide the environmental protection that comply with the applicable laws and regulations. Describe the procedures to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures as described in the Environmental Protection Plan.
 - h. Permits, licenses, and the location of the solid waste disposal area.
 - i. Not used
 - j. Environmental Monitoring Plans for the job site including air and noise.
 - k. Work Area Plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.
- B. Approval of the Contractor's Environmental Protection Plan will not relieve the Contractor of responsibility for adequate and continued control of pollutants and other environmental protection measures.

1.5 PROTECTION OF ENVIRONMENTAL RESOURCES

A-D. Not Used

E. Protection of Air Resources: Keep construction activities under surveillance, management, and control to minimize pollution of air resources. Burning is not permitted on the job site. Keep activities, equipment, processes, and work operated or performed, in strict accordance with the State of Oregon and Federal emission and performance laws

and standards. Maintain ambient air quality standards set by the Environmental Protection Agency, for those construction operations and activities specified.

- 1. Particulates: Control dust particles, aerosols, and gaseous by-products from all construction activities, processing, and preparation of materials at all times, including weekends, holidays, and hours when work is not in progress.
- 2. Not Used
- 3. Hydrocarbons and Carbon Monoxide: Control monoxide emissions from equipment to Federal and State allowable limits.
- 4. Odors: Control odors of construction activities and prevent obnoxious odors from occurring.
- F. Reduction of Noise: Minimize noise using every action possible. Perform noise-producing work in less sensitive hours of the day or week as directed by the COTR. Maintain noise-produced work at or below the decibel levels and within the time periods specified.
 - 1. Perform construction activities involving repetitive, high-level impact noise only between 8:00 a.m. and 6:00p.m unless otherwise permitted by the COTR. Repetitive impact noise on the property shall not exceed the following dB limitations:

Time Duration of Impact Noise	Sound Level in dB
More than 12 minutes in any hour	70
Less than 30 seconds of any hour	85
Less than three minutes of any hour	80
Less than 12 minutes of any hour	75

- 2. Provide sound-deadening devices on equipment and take noise abatement measures that are necessary to comply with the requirements of this contract, consisting of, but not limited to, the following:
 - a. Maintain maximum permissible construction equipment noise levels at 15 m (50 feet) (dBA):

EQUIPME	NT	MATERIALS HANI	DLING
GENERATORS	75	SAWS	75
COMPRESSOR	75	VIBRATORS	75

- b. Use shields or other physical barriers to restrict noise transmission.
- c. Provide soundproof housings or enclosures for noise-producing machinery.
- d. Use efficient silencers on equipment air intakes.
- e. Use efficient intake and exhaust mufflers on internal combustion engines that are maintained so equipment performs below noise levels specified.
- f. Line hoppers and storage bins with sound deadening material.
- g. Conduct truck loading, unloading, and hauling operations so that noise is kept to a minimum.
- 3. Measure sound level for noise exposure due to the construction at least once every five successive working days while work is being performed above 55 dB(A) noise

- level. Use General Purpose sound level meter at slow response. To minimize the effect of reflective sound waves at buildings, take measurements at 900 to 1800 mm (three to six feet) in front of any building face. Submit the recorded information to the COTR noting any problems and the alternatives for mitigating actions.
- G. Restoration of Damaged Property: If any direct or indirect damage is done to public or private property resulting from any act, omission, neglect, or misconduct, the Contractor shall restore the damaged property to a condition equal to that existing before the damage at no additional cost to the Government. Repair, rebuild, or restore property as directed or make good such damage in an acceptable manner.
- H. Final Clean-up: On completion of project and after removal of all debris, rubbish, and temporary construction, Contractor shall leave the construction area in a clean condition satisfactory to the COTR. Cleaning shall include off the station disposal of all items and materials not required to be salvaged, as well as all debris and rubbish resulting from demolition and new work operations.

SECTION 01 74 19 CONSTRUCTION WASTE MANAGEMENT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This section specifies the requirements for the management of non-hazardous building construction and demolition waste.
- B. Waste disposal in landfills shall be minimized to the greatest extent possible. Of the inevitable waste that is generated, as much of the waste material as economically feasible shall be salvaged, recycled or reused.
- C. Contractor shall use all reasonable means to divert construction and demolition waste from landfills and incinerators, and facilitate their salvage and recycle not limited to the following:
 - 1. Waste Management Plan development and implementation.
 - 2. Techniques to minimize waste generation.
 - 3. Sorting and separating of waste materials.
 - 4. Salvage of existing materials and items for reuse or resale.
 - 5. Recycling of materials that cannot be reused or sold.
- D. At a minimum the following waste categories shall be diverted from landfills:
 - 1. Soil.
 - 2. Inerts (eg, concrete, masonry and asphalt).
 - 3. Clean dimensional wood and palette wood.
 - 4. Green waste (biodegradable landscaping materials).
 - 5. Engineered wood products (plywood, particle board and I-joists, etc).
 - 6. Metal products (eg, copper, steel, wire, beverage containers, etc).
 - 7. Cardboard, paper and packaging.
 - 8. Bitumen roofing materials.
 - 9. Plastics (eg, ABS, PVC).
 - 10. Carpet and/or pad.
 - 11. Gypsum board.
 - 12. Insulation.
 - 13. Paint.
 - 14. Fluorescent lamps

1.2 RELATED WORK

- A. Section 01 00 00, GENERAL REQUIREMENTS.
- B. Section 02 41 00, DEMOLITION.
- C. Section 02 83 33.19 LEAD BASED PAINT REMOVAL

1.3 QUALITY ASSURANCE

- A. Contractor shall practice efficient waste management when sizing, cutting and installing building products. Processes shall be employed to ensure the generation of as little waste as possible. Construction /Demolition waste includes products of the following:
 - 1. Excess or unusable construction materials.

- 2. Packaging used for construction products.
- 3. Poor planning and/or layout.
- 4. Construction error.
- 5. Over ordering.
- 6. Weather damage.
- 7. Contamination.
- 8. Mishandling.
- 9. Breakage.
- B. Establish and maintain the management of non-hazardous building construction and demolition waste set forth herein. Conduct a site assessment to estimate the types of materials that will be generated by demolition and construction.
- C. Contractor shall develop and implement procedures to reuse and recycle new materials to a minimum of 50 percent.
- D. Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling. Any revenues or savings obtained from salvage or recycling shall accrue to the contractor.
- E. Contractor shall provide all demolition, removal and legal disposal of materials. Contractor shall ensure that facilities used for recycling, reuse and disposal shall be permitted for the intended use to the extent required by local, state, federal regulations. The Whole Building Design Guide website: http://www.wbdg.org provides a Construction Waste Management Database that contains information on companies that haul. Collect, and process recyclable debris from construction projects.
- F. Contractor shall assign a specific area to facilitate separation of materials for reuse, salvage, recycling, and return. Such areas are to be kept neat and clean and clearly marked in order to avoid contamination or mixing of materials.
- G. Contractor shall provide on-site instructions and supervision of separation, handling, salvaging, recycling, reuse and return methods to be used by all parties during waste generating stages.
- H. Record on daily reports any problems in complying with laws, regulations and ordinances with corrective action taken.

1.4 TERMINOLOGY

- A. Class III Landfill: A landfill that accepts non-hazardous resources such as household, commercial and industrial waste resulting from construction, remodeling, repair and demolition operations.
- B. Clean: Untreated and unpainted; uncontaminated with adhesives, oils, solvents, mastics and like products.
- C. Construction and Demolition Waste: Includes all non-hazardous resources resulting from construction, remodeling, alterations, repair and demolition operations.
- D. Dismantle: The process of parting out a building in such a way as to preserve the usefulness of its materials and components.
- E. Disposal: Acceptance of solid wastes at a legally operating facility for the purpose of land filling (includes Class III landfills and inert fills).
- F. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert materials are taken for the purpose of filling an excavation, shoring or other soil engineering operation.

- G. Inert Fill: A facility that can legally accept inert waste, such as asphalt and concrete exclusively for the purpose of disposal.
- H. Inert Solids/Inert Waste: Non-liquid solid resources including, but not limited to, soil and concrete that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by a regional water board, and does not contain significant quantities of decomposable solid resources.
- I. Mixed Debris: Loads that include co-mingled recyclable and non-recyclable materials generated at the construction site.
- J. Mixed Debris Recycling Facility: A solid resource processing facility that accepts loads of mixed construction and demolition debris for the purpose of recovering re-usable and recyclable materials and disposing non-recyclable materials.
- K. Permitted Waste Hauler: A company that holds a valid permit to collect and transport solid wastes from individuals or businesses for the purpose of recycling or disposal.
- L. Recycling: The process of sorting, cleansing, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating or thermally destroying solid waste.
 - 1. On-site Recycling Materials that are sorted and processed on site for use in an altered state in the work, i.e. concrete crushed for use as a sub-base in paving.
 - 2. Off-site Recycling Materials hauled to a location and used in an altered form in the manufacture of new products.
- M. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of new products. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a solid waste facilities permit or be regulated by the local enforcement agency.
- N. Reuse: Materials that are recovered for use in the same form, on-site or off-site.
- O. Return: To give back reusable items or unused products to vendors for credit.
- P. Salvage: To remove waste materials from the site for resale or re-use by a third party.
- Q. Source-Separated Materials: Materials that are sorted by type at the site for the purpose of reuse and recycling.
- R. Solid Waste: Materials that have been designated as non-recyclable and are discarded for the purposes of disposal.
- S. Transfer Station: A facility that can legally accept solid waste for the purpose of temporarily storing the materials for re-loading onto other trucks and transporting them to a landfill for disposal, or recovering some materials for re-use or recycling.

1.5 SUBMITTALS

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, and SAMPLES, furnish the following:
- B. Prepare and submit to the COTR a written Demolition Debris Management Plan. The plan shall include, but not be limited to, the following information:
 - 1. Procedures to be used for debris management.
 - 2. Techniques to be used to minimize waste generation.
 - 3. Analysis of the estimated job site waste to be generated:
 - a. List of each material and quantity to be salvaged, reused, or recycled.
 - b. List of each material and quantity proposed to be taken to a landfill.

- 4. Detailed description of the Means/Methods to be used for material handling.
 - a. On site: Material separation, storage, protection where applicable.
 - b. Off site: Transportation means and destination. Include list of materials.
 - 1) Description of materials to be site-separated and self-hauled to designated facilities.
 - 2) Description of mixed materials to be collected by designated waste haulers and removed from the site.
 - c. The names and locations of mixed debris reuse and recycling facilities or sites.
 - d. The names and locations of trash disposal landfill facilities or sites.
 - e. Documentation that the facilities or sites are approved to receive the materials.
- C. Designated Manager responsible for instructing personnel, supervising, documenting and administer over meetings relevant to the Waste Management Plan.
- D. Monthly summary of construction and demolition debris diversion and disposal, quantifying all materials generated at the work site and disposed of or diverted from disposal through recycling.

1.6 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced by the basic designation only. In the event that criteria requirements conflict, the most stringent requirements shall be met.
 - 1. U.S. Green Building Council (USGBC):
 - 2. LEED Green Building Rating System for Remodeling Construction

1.7 RECORDS

Maintain records to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. Records shall be kept in accordance with the LEED Reference Guide and LEED Template.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. List of each material and quantity to be salvaged, recycled, reused.
- B. List of each material and quantity proposed to be taken to a landfill.
- C. Material tracking data: Receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices, net total costs or savings.

PART 3 - EXECUTION

3.1 COLLECTION

- A. Provide all necessary containers, bins and storage areas to facilitate effective waste management.
- B. Clearly identify containers, bins and storage areas so that recyclable materials are separated from trash and can be transported to respective recycling facility for processing.
- C. Hazardous wastes shall be separated, stored, disposed of according to local, state, federal regulations, see Section 02 83 33.

3.2 DISPOSAL

- A. Contractor shall be responsible for transporting and disposing of materials that cannot be delivered to a source-separated or mixed materials recycling facility to a transfer station or disposal facility that can accept the materials in accordance with state and federal regulations.
- B. Construction or demolition materials with no practical reuse or that cannot be salvaged or recycled shall be disposed of at a landfill or incinerator.

3.3 REPORT

- A. With each application for progress payment, submit a summary of construction and demolition debris diversion and disposal including beginning and ending dates of period covered
- B. Quantify all materials diverted from landfill disposal through salvage or recycling during the period with the receiving parties, dates removed, transportation costs, weight tickets, manifests, invoices. Include the net total costs or savings for each salvaged or recycled material.
- C. Quantify all materials disposed of during the period with the receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices. Include the net total costs for each disposal.

SECTION 01 81 11

SUSTAINABLE DESIGN REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

This Section describes general requirements and procedures to comply with the Guiding Principles for Leadership in High Performance and Sustainable Buildings Memorandum of Understanding incorporated in the Executive Orders 13423 and 13514; Energy Policy Act of 2005 (EPA 2005) and the Energy Independence and Security Act of 2007 (EISA 2007).

1.2 OBJECTIVES

- A. To obtain acceptable Indoor Air Quality (IAQ) for the completed project and minimize the environmental impacts of the construction and operation, the Contractor during the construction phase of this project shall implement the following procedures:
 - 1. Select products that minimize consumption of non-renewable resources, consume reduced amounts of energy and minimize amounts of pollution to produce, and employ recycled and/or recyclable materials. It is the intent of this project to conform with EPA's Five Guiding Principles on environmentally preferable purchasing. The five principles are:
 - a. Include environmental considerations as part of the normal purchasing process.
 - b. Emphasize pollution prevention early in the purchasing process.
 - c. Examine multiple environmental attributes throughout a product's or service's life cycle.
 - d. Compare relevant environmental impacts when selecting products and services.
 - e. Collect and base purchasing decisions on accurate and meaningful information about environmental performance.
 - 2. Control sources for potential IAQ pollutants by controlled selection of materials and processes used in project construction in order to attain superior IAQ.
 - 3. Products and processes that achieve the above objectives to the extent currently possible and practical have been selected and included in these Construction Documents. The Contractor is responsible to maintain and support these objectives in developing means and methods for performing the work of this Contract and in proposing product substitutions and/or changes to specified processes.
 - 4. Use building practices that insure construction debris and particulates do mot contaminate or enter duct work prior to system startup and turn over.

1.3 RELATED DOCUMENTS

- A. Section 01 74 19 CONSTRUCTION WASTE MANANGEMENT
- B. Section 01 00 00 Section 1.8, INFECTION PREVENTION, DUST CONTROL AND VENTILATION
- C. Section 01 91 00 GENERAL COMMISSIONG REQUIREMENTS

1.4 DEFINITIONS

- A. Agrifiber Products: Composite panel products derived from agricultural fiber
- B. Biobased Product: As defined in the 2002 Farm Bill, a product determined by the Secretary to be a commercial or industrial product (other than food or feed) that is composed, in whole or

- in significant part, of biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials
- C. Biobased Content: The weight of the biobased material divided by the total weight of the product and expressed as a percentage by weight
- D. Certificates of Chain-of-Custody: Certificates signed by manufacturers certifying that wood used to make products has been tracked through its extraction and fabrication to ensure that is was obtained from forests certified by a specified certification program
- E. Composite Wood: A product consisting of wood fiber or other plant particles bonded together by a resin or binder
- F. Construction and Demolition Waste: Includes solid wastes, such as building materials, packaging, rubbish, debris, and rubble resulting from construction, remodeling, repair and demolition operations. A construction waste management plan is to be provided by the Contractor as defined in Section 01 74 19.
- G. Third Party Certification: Certification of levels of environmental achievement by nationally recognized sustainability rating system.
- H. Light Pollution: Light that extends beyond its source such that the additional light is wasted in an unwanted area or in an area where it inhibits view of the night sky
- I. Recycled Content Materials: Products that contain pre-consumer or post-consumer materials as all or part of their feedstock
- J. Post-Consumer Recycled Content: The percentage by weight of constituent materials that have been recovered or otherwise diverted from the solid-waste stream after consumer use
- K. Pre-Consumer Recycled Content: Materials that have been recovered or otherwise diverted from the solid-waste stream during the manufacturing process. Pre-consumer content must be material that would not have otherwise entered the waste stream as per Section 5 of the FTC Act, Part 260 "Guidelines for the Use of Environmental Marketing Claims": www.ftc.gov/bcp/grnrule/guides980427
- L. Regional Materials: Materials that are extracted, harvested, recovered, and manufactured within a radius of 250 miles (400 km) from the Project site
- M. Salvaged or Reused Materials: Materials extracted from existing buildings in order to be reused in other buildings without being manufactured
- N. Sealant: Any material that fills and seals gaps between other materials
- O. Type 1 Finishes: Materials and finishes which have a potential for short-term levels of off gassing from chemicals inherent in their manufacturing process, or which are applied in a form requiring vehicles or carriers for spreading which release a high level of particulate matter in the process of installation and/or curing.
- P. Type 2 Finishes: "Fuzzy" materials and finishes which are woven, fibrous, or porous in nature and tend to adsorb chemicals offgas
- Q. Volatile Organic Compounds (VOCs): Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. Compounds that have negligible photochemical reactivity, listed in EPA 40 CFR 51.100(s), are also excluded from this regulatory definition.

1.5 SUBMITTALS

- A. Sustainable Design Submittals:
 - 1-13. Not Used
 - 14. Biobased Products:

- a. Rapidly Renewable Products: Submittals must include written documentation from the manufacturer declaring that rapidly renewable materials are made from plants harvested within a ten-year or shorter cycle and must indicate the percentage (by weight) of these rapidly renewable components contained in the candidate products, along with the costs of each of these materials, excluding labor and delivery costs.
- b. Certified Wood: Submittals for all wood-based materials must include a statement indicating the cost of each product containing FSC Certified wood, exclusive of labor and delivery costs, and third party verification of certification from one of the following:
 - 1) Documentation from the supplier verifying that 100% of the wood-based content originates from SFI third-party certified forest lands, identifying the company or companies that performed the SFI third-party certification for both the forest land management and the certified product content.
- 15. Not Used.
- 16. Interior Adhesives and Sealants: Submittals for all field-applied adhesives and sealants, which have a potential impact on indoor air, must include manufacturer's MSDSs or other Product Data highlighting VOC content.
 - a. Provide manufacturers' documentation verifying all adhesives used to apply laminates, whether shop-applied or field-applied, contain no urea-formaldehyde.
- 17. Interior Paints and Coatings: Submittals for all field-applied paints and coatings, which have a potential impact on indoor air, must include manufacturer's MSDSs or other Product Data highlighting VOC content
- 18-23. Not Used
- 24. Mercury in Lighting: Provide manufacturer's cut sheets or product data for all fluorescent or HID lamps highlighting mercury content.
- 25-27 Not Used
- 28. Gypsum Wall Board: Provide manufacturer's cut sheets or product data verifying that all gypsum wallboard products are moisture and mold-resistant.
- 29. Fiberglass Insulation: Provide manufacturer's cut sheets or product data verifying that fiberglass batt insulation contains no urea-formaldehyde.
- 30. Not Used
- 31. Green Housekeeping: Provide documentation that all cleaning products and janitorial paper products meet the VOC limits and content requirements of this specification section.
- B. Not Used.
- C. Construction Waste Management: See Section 01 74 19 "Construction Waste Management" for submittal requirements.
- D. Construction Indoor Air Quality (IAQ) Management: Clarify with COTR prior to bidding if you will be required to submittal the following:
 - 1. Not more than 30 days after the Preconstruction Meeting, prepare and submit for the COTR's approval, an electronic copy of the draft Construction IAQ Management Plan in an electronic file including, but not limited to, descriptions of the following:
 - Instruction procedures for meeting or exceeding the minimum requirements of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, 1995, Chapter 3, including procedures for HVAC Protection, Source Control, Pathway Interruption, Housekeeping, and Scheduling

- a. Instruction procedures for protecting absorptive materials stored on-site or installed from moisture damage
- Schedule of submission to COTR of photographs of on-site construction IAQ management measures such as protection of ducts and on-site stored oil installed absorptive materials
- c. Instruction procedures if air handlers must be used during construction, including a description of filtration media to be used at each return air grille
- d. Instruction procedure for replacing all air-filtration media immediately prior to occupancy after completion of construction, including a description of filtration media to be used at each air handling or air supply unit
- 3. Not more than 30 days following receipt of the approved draft CIAQMP, submit an electronic copy of the approved CIAQMP in an electronic file, along with the following:
 - a. Manufacturer's cut sheets and product data highlighting the Minimum Efficiency Reporting Value (MERV) for all filtration media to be installed at return air grilles during construction if permanently installed AHUs are used during construction.
 - b. Manufacturer's cut sheets and product data highlighting the Minimum Efficiency Reporting Value (MERV) for filtration media in all air handling units (AHUs).
- 4. Not more than 14 days after Substantial Completion provide the following:
 - a. Documentation verifying required replacement of air filtration media in all air handling units (AHUs) after the completion of construction and prior to occupancy and, if applicable, required installation of filtration during construction.
 - b. Minimum of 18 Construction photographs: Six photographs taken on three different occasions during construction of the SMACNA approaches employed, along with a brief description of each approach, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials.
 - c. A copy of the report from testing and inspecting agency documenting the results of IAQ testing, demonstrating conformance with IAQ testing procedures and requirements defined in Section 01 81 09 "Testing for Indoor Air Quality."
- E. Not Used
- F. Sustainable Design Progress Reports: Concurrent with each Application for Payment, submit reports for the following:
 - 1. Construction Waste Management: Waste reduction progress reports and logs complying with the requirements of Section 01 74 19 "Construction Waste Management."
 - 2. Construction IAQ Management: See details below under Section 3.2 Construction Indoor Air Quality Management for Construction IAQ management progress report requirements.

1.6 QUALITY ASSURANCE

A. Preconstruction Meeting: After award of Contract and prior to the commencement of the Work, if directed by the COTR, schedule and conduct meeting with COTR, Architect, and all Subcontractors to discuss the Construction Waste Management Plan, the required Construction Indoor Air Quality (IAQ) Management Plan, and all other Sustainable Design Requirements. The purpose of this meeting is to develop a mutual understanding of the Project's Sustainable Design Requirements and coordination of the Contractor's management of these requirements with the Contracting Officer and the Construction Quality Manager.

B. Construction Job Conferences: The status of compliance with the Sustainable Design Requirements of these specifications will be an agenda item at all regular job meetings conducted during the course of work at the site.

PART 2 - PRODUCTS

2.1 PRODUCT ENVIRONMENTAL REQUIREMENTS

- A-N. Not Used:
- O. Recycled Content of Materials:
 - Provide building materials with recycled content such that post-consumer recycled content
 value plus half the pre-consumer recycled content value constitutes a minimum of 30% of
 the cost of materials used for the Project, exclusive of all MEP equipment, labor, and
 delivery costs. The Contractor shall make all attempts to maximize the procurement of
 materials with recycled content.
 - a. post-consumer recycled content value of a material shall be determined by dividing the weight of post-consumer recycled content by the total weight of the material and multiplying by the cost of the material.
 - b. Do not include mechanical and electrical components in the calculations.
 - c. Do not include labor and delivery costs in the calculations.
 - d. Recycled content of materials shall be defined according to the Federal Trade Commission's "Guide for the Use of Environmental Marketing Claims," 16 CFR 260.7 (e).
 - e. Utilize all on-site existing paving materials that are scheduled for demolition as granulated fill, and include the cost of this material had it been purchased in the calculations for recycled content value.
 - f. The materials in the following list must contain the minimum recycled content indicated:

Category	Minimum Recycled Content
Aluminum Fabrications	35% combined
Rigid Insulation	20% pre-consumer
Batt insulation	30% combined

SECTION 02 41 00 **DEMOLITION**

PART 1 - GENERAL

1.1 DESCRIPTION:

This section specifies demolition and removal of portions of buildings as shown and recycling and/or removing debris from site.

1.2 RELATED WORK:

- A. Safety Requirements: GENERAL CONDITIONS Article, ACCIDENT PREVENTION.
- B Asbestos Removal: Section 02 82 11, TRADITIONAL ASBESTOS ABATEMENT (not included. See Drawings, Sheet A0.1, General Notes).
- C. Lead Paint: Section 02 83 33.13, LEAD-BASED PAINT REMOVAL AND DISPOSAL.
- D. Environmental Protection: Section 01 57 19, TEMPORARY ENVIRONMENTAL CONTROLS.
- E. Construction Waste Management: Section 017419 CONSTRUCTION WASTE MANAGEMENT.
- F. Infectious Control: Section 01 00 00, GENERAL REQUIREMENTS, Article 1.7, INFECTION PREVENTION MEASURES

1.3 PROTECTION:

- A. Perform demolition in such manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities; and to provide free passage to and from such adjacent areas of structures. Comply with requirements of GENERAL CONDITIONS Article, ACCIDENT PREVENTION.
- B. Provide safeguards, including warning signs, scaffolding and barricades, temporary fences, warning lights, and other similar items that are required for protection of all personnel during demolition and removal operations. Comply with requirements of Section 01 00 00, GENERAL REQUIREMENTS, Article 1.9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES AND IMPROVEMENTS.
- C. Provide enclosed dust chutes with control gates from each area to carry debris to truck beds and govern flow of material into truck. Provide overhead bridges of tight board or prefabricated metal construction at dust chutes to protect persons and property from falling debris.
- D. Prevent spread of flying particles and dust. Sprinkle rubbish and debris with water to keep dust to a minimum. Do not use water if it results in hazardous or objectionable condition such as, but not limited to; ice, flooding, or pollution. <u>Vacuum and dust the work area</u> daily.
- E. In addition to previously listed fire and safety rules to be observed in performance of work, include following:

- 1. No materials shall be permitted to fall outwardly from structures.
- 2. Wherever a cutting torch or other equipment that might cause a fire is used, provide and maintain fire extinguishers nearby ready for immediate use. Instruct all possible users in use of fire extinguishers.
- 3. Keep hydrants clear and accessible at all times. Prohibit debris from accumulating within a radius of 4500 mm (15 feet) of fire hydrants.
- F. Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The contractor shall take necessary precautions to avoid damages to existing items to remain in place, to be reused. Damaged items shall be repaired or replaced as approved by the COTR. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal works. Repairs, reinforcement, or structural replacement must have COTR's approval.
- G. The work shall comply with the requirements of Section 01 57 19, TEMPORARY ENVIRONMENTAL CONTROLS.
- H. The work shall comply with the requirements of Section 01 00 00, GENERAL REQUIREMENTS.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 DEMOLITION:

- A. Completely demolish and remove all as shown to be removed on the drawings.
- B. Debris, and similar materials shall become property of Contractor and shall be disposed of by the Contractor daily, off Campus, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the COTR. Dispose of debris in compliance with applicable federal, state or local permits, rules and/or regulations.
- C. The removal of hazardous material shall be referred to Hazardous Materials specifications.

3.2 CLEAN-UP:

On completion of work of this section and after removal of all debris, leave site in clean condition satisfactory to COTR. Clean-up shall include, off the VA Campus, disposal of all items and materials not required to remain property of the Government as well as all debris and rubbish resulting from demolition operations.

SECTION 02 83 33.13

LEAD BASED PAINT REMOVAL & DISPOSAL

PART 1 – GENERAL

1.1 SCOPE

This section specifies the Lead Handling Procedures for the removal of lead containing painted materials and controls needed to limit occupational and environmental exposure to lead hazards.

- A. The Lead Handling Procedures apply to contractors and sub-contractors performing any task such as; manual demolition, selective demolition, sanding, patching, paint preparation, or any task performed on painted surfaces which may result in occupational exposures to lead. All contractors performing tasks as identified under OAR 437-003-001 (Construction Industry Standard, Oregon) shall be required to perform work in accordance with the standard and these specifications.
- B. Work Requirements under this section include but are not limited to; evaluation of work practices, development of a written lead compliance program, lead awareness training, respiratory protection, engineering controls, wash facilities and signage.
- C. Contractor should assume all painted surfaces (walls, soffit, trim, windows, doors, etc.) as lead containing unless indicated otherwise in report available from COTR.
- D. Any Contractor that is subject to potential lead exposure shall provide all labor, materials, equipment, and services, necessary to comply with the OSHA standard.
- E. The General Contractor and its subcontractors shall select work methods that minimize the creation and exposure to lead containing dust. If work practices or surface preparation methods create dust that cannot be readily controlled via wet methods or by using basic work area isolation then the Veterans Administration (VA) may utilize a Hazardous Material Abatement contractor to perform the necessary removal of lead containing construction materials. The Contractor shall coordinate with the (VA) and a Hazardous Material Abatement Contractor as necessary to accommodate the work.

1.2 RELATED WORK

- A Section 02 82 11, TRADITIONAL ASBESTOS ABATEMENT.
- B. Section 02 41 00, DEMOLITION.
- C. Section 09 91 00, PAINTING.

1.3 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
- B. Code of Federal Regulations (CFR):

- CFR 29 Part 1910......Occupational Safety and Health Standards
- CFR 29 Part 1926......Safety and Health Regulations for Construction
- CFR 40 Part 260.......Hazardous Waste Management System: General
- CFR 40 Part 261......Identification and Listing of Hazardous Waste
- CFR 40 Part 262......Standards Applicable to Generators of Hazardous Waste
- CFR 40 Part 268.....Land Disposal Restrictions
- CFR 49 Part 172......Hazardous Material Table, Special Provisions, Hazardous Material Communications, Emergency Response Information, and Training Requirements
- C. National Institute for Occupational Safety and Health (NIOSH) NIOSH OSHA Booklet 3142. Lead in Construction
- D. Underwriters Laboratories (UL) UL 586-1996 (Rev 2004).. High-Efficiency, Particulate, Air Filter Units
- E. American National Standards Institute Z88.2-1992......Respiratory Protection

1.4 DEFINITIONS

- A. Action Level: Employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8-hour period.
- B. Air Monitoring: The process of measuring the airborne concentrations of a specific volume of air in a stated period of time.
- C. Atomic Absorption: A method of measuring elements such as lead. The lead is vaporized at high temperature, usually several thousand degrees, and light of a very specific wavelength is shined through the vapor.
- D. Containment: A process for protecting both workers and the environment by controlling exposures to lead dust and debris created during manual demolition of lead containing painted materials.
- E. Contractor: The General Contractor, Subcontractor, Abatement Contractor or person performing lead handling procedures specified herein.
- F. Engineering Controls: Measures implemented at the work site to contain, control and/or otherwise reduce exposure to lead dust and debris.
- G. Exposure Monitoring: The personal air monitoring of an employee's breathing zone to determine the amount of contaminant (e.g. lead) to which he/she is exposed.
- H. High Efficiency Particulate Air (HEPA) Filter Equipment: HEPA filtered vacuuming equipment with a UL 586 filter system capable of collecting and retaining lead-contaminated paint dust. A high efficiency particulate filter means 99.97 percent efficient against 0.3 micron size particles.
- I. Independent Testing Laboratory: A qualified AIHA ELPAT laboratory financially independent from and hired by the Owner or Contractor.
- J. Environmental Professional: The representative assigned to monitor work progress, perform sampling and visually inspect areas during and after disturbance of lead containing painted materials.
- K. Micrograms: One millionth of a gram: μg : The prefix "micro" means "1/1,000,000 of" (one millionth of).
- L. Paint Removal: Stripping or removal of lead paint from surfaces of components.

- M. ppm: Stands for "parts per million", meaning the weight of one part per weight of the total amount of material. For example, a lead concentration of 1 ppm expresses the ratio of one gram of lead dissolved into one million (1,000,000) grams of water.
- N. Public Area: Any area outside the isolated work area. When work area isolation measures are removed, the work area becomes a public area.
- O. Regulated Area: An area where the Permissible Exposure Limit is expected to be exceeded and where only trained personnel with appropriate personal protective equipment are allowed.

1.5 SUBMITTALS

- A. The Contractor shall submit three copies of the following information to the Architect and the Contacting Officer (COTR) prior to beginning work on the project.
 - 1. WORKER TRAINING PROGRAM. Submit written proof indicating that all employees impacting lead-containing materials have received training per OAR 437-03-001.
 - 2. LEAD COMPLIANCE PLAN. Submit a written "Compliance Plan" satisfactory to the VA describing the methods for lead handling procedures, worker training and protection measures, engineering controls, dust control and collection techniques, etc. in compliance with OAR 437 Div. 3-001, these Specifications and applicable regulations. The Contractor shall update the Lead Compliance Plan as necessary while work progresses. The General Contractor may elect to incorporate affected subcontractors individual work plans into an overall project lead compliance program.
- B. Contractor shall not begin work until submittals are complete, reviewed and accepted by the COTR. Allow a five (5) working day review period.
- C. During the work the Contractor shall submit all sampling and exposure monitoring data.

1.6 LEAD EXPOSURE MONITORING AND TESTING REQUIREMENTS

- A. Contractors shall perform employee exposure assessments as required under OAR 437-03-001 (29 CFR Part 1926) for any employees performing tasks that may result in exposures above the Action Level.
- B. An Independent Testing Laboratory shall be retained by the contractor. All exposure monitoring analysis shall be performed in accordance with 29 CFR Part 1926.62 as adopted by OR-OSHA.
- C. The VA reserves the right to monitor Contractor's performance via air, dust wipe and bulk samples during removal work, in addition to the Contractor's exposure monitoring and testing.

1.7 QUALITY ASSURANCE

- A. Periodic monitoring of air and surface dust may be collected and analyzed by VA in occupied spaces and containment areas. The following lead exposure limits shall apply to all areas where lead handling procedures are undertaken.
 - 1. Air Samples:
 - 30 μg/m³ OSHA Action Level
 - (8-hour Time-Weighted Average)
 - 50 μg/m³ OSHA Permissible Exposure Limit
 - (8-hour Time-Weighted Average)

- 2. Dust Samples: (Expected levels at completion of major demolition)
 - 40 μg/ft² Clearance for Stripped Surfaces, Components, etc.
 - 40 µg/ft² Clearance Level for floors
 - 250 μg/ft² Clearance Level for interior window sills
 - 250 μg/ft² Clearance Level for rough surfaces
- B. If, at any time during the work, analysis of occupied area air or wipe samples taken by the Contractor, VA or the VA's representative, indicates a concentration in excess of the allowable maximums specified, the contractor shall immediately notify:
 - 1. The General Contractor's Superintendent
 - 2. The COTR and
 - 3. VA Safety Officer or VA Industrial Hygienist.
- C. Immediately upon being notified of concentrations exceeding the specified maximum allowable levels, the Contractor shall perform the following steps in the order presented, at no additional cost to the Government:
 - 1. Stop Lead related work.
 - 2. The VA will determine the affected area and affected adjacent areas considered to be contaminated and will determine the actions to be taken.
 - 3. Modify work procedures, if feasible and make other changes determined to be the possible cause of high lead concentrations.
 - 4. Carefully resume work under close supervision and monitoring.
 - 5. The Contractor shall be responsible for costs of any testing, cleanup, repair, down time loss, etc. that is a result of the Contractor's negligence, poor maintenance of containment areas or improper procedures.

1.8 PERSONNEL PROTECTION

A. Training

- 1. When demolition of lead containing painted materials or lead handling activities result or are expected to exceed the Action Level, the Contractor shall follow personnel protection and work area isolation procedures outlined in this section.
- 2. Prior to commencement of work, Contractor shall ensure all workers have been adequately trained as specified in 29 CFR 1926.62.
- 3. The Contractor shall provide and post at hand wash locations, the decontamination, respirator, and work procedures to be followed by the workers as outlined in the written Lead Compliance Program.
- 4. Workers shall not eat, drink, chew gum or apply cosmetics in the established work area. Smoking or using other tobacco products is prohibited.

PART 2 – PRODUCTS

2.1 TOOLS AND EQUIPMENT

- A. Water Sprayer: airless or low-pressure sprayer for soapy (high phosphate) wash water application.
- B. HEPA Vacuum: see Section 1.4 Definitions for additional information.

PART 3 – EXECUTION

3.1 EXTERIOR WORK AREA CONTAINMENT PREPARATION

- A. Exterior work is not anticipated in this work. Prior to exterior demolition activities impact any lead containing painted materials the Contractor shall perform the following procedures:
 - 1. If the demolition of any lead containing painted materials process will impact or provide access to the interior of a building the Contractor must construct critical barriers or partial containments within interior to prevent lead contamination from impacting the interior of a building.
 - 2. Install 6-mil poly below the area of demolition sufficient to collect any loose or falling debris
 - 3. Prior to demolition of any lead containing painted materials the Contractor must thoroughly wet all painted material with soapy water.
- B. Alternative engineering control methods considered by the Contractor must be proven by historical data and approved by the COTR. The liberal use of water, ventilation and HEPA air filtration devices are most effective for reducing airborne lead concentrations.

3.3 WASTE DISPOSAL

- A. Cleanup: Maintain all surfaces and work areas free of accumulations of lead-containing painted materials and/or paint chips and dust. Restrict the spread of dust and debris; keep waste from being distributed over the work area. Do not dry sweep or use compressed air to clean up the area. At the end of each shift and when the lead-containing painted materials removal has been completed, clean the area of visible debris by vacuuming with a HEPA filtered vacuum cleaner.
- B. Disposal Documentation: Submit written evidence that the demolition debris and waste has been transported and disposed of at a landfill licensed to accept demolition debris. Submit one copy of the completed manifest, signed and dated by the transporter and landfill representative accepting the waste.

SECTION 06 10 00 ROUGH CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION:

Section specifies wood blocking, nailers and light wood construction.

1.2 RELATED WORK:

A. Demolition, Section 02 41 00 and Division 9 - Finishes.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Protect lumber and other products from dampness both during and after delivery to project site.
- B. Pile lumber in stacks in such manner as to provide air circulation around surfaces of each piece.
- C. Stack plywood and other board products so as to prevent warping.
- D. Locate stacks on well drained areas, supported at least 150 mm (6 inches) above grade and cover with well ventilated sheds having firmly constructed over hanging roof with sufficient end wall to protect lumber from driving rain.

1.4 APPLICABLE PUBLICATIONS:

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in the text by basic designation only.
- B. American Forest and Paper Association (AFPA):

National Design Specification for Wood Construction

NDS-05Conventional Wood Frame Construction

C. American Institute of Timber Construction (AITC):

A190.1-02Structural Glued Laminated Timber

D. American Society of Mechanical Engineers (ASME):

B18.2.1A-96 (R2005)Square and Hex Bolts and Screws

B18.2.2-87 (R2005)Square and Hex Nuts

B18.6.1-81 (R97)Wood Screws

B18.6.4-98 (R2005)Thread Forming and Thread Cutting Tapping Screws and Metallic Drive Screws

E. American Plywood Association (APA):

E30-03.....Engineered Wood Construction Guide

F. American Society for Testing And Materials (ASTM):

A47-99 (R2004)Ferritic Malleable Iron Castings

A48-03Gray Iron Castings

A653/A653M-07.....Steel Sheet Zinc-Coated (Galvanized) or Zinc-Iron Alloy

Coated (Galvannealed) by the Hot Dip Process

C954-04.....Steel Drill Screws for the Application of Gypsum Board or

Metal Plaster Bases to Steel Studs from 0.033 inch (2.24

mm) to 0.112-inch (2.84 mm) in thickness

C1002-04.....Steel Self-Piercing Tapping Screws for the Application of

Gypsum Panel Products or Metal Plaster Bases to Wood

Studs or Metal Studs

	D143-94 (R2004)	Small Clear Specimens of Timber, Method of Testing	
	D1760-01	Pressure Treatment of Timber Products	
	D2559-04	Adhesives for Structural Laminated Wood Products for Use	
		Under Exterior (Wet Use) Exposure Conditions	
	D3498-03	Adhesives for Field-Gluing Plywood to Lumber Framing	
		for Floor Systems	
	F844-07	Washers, Steel, Plan (Flat) Unhardened for General Use	
	F1667-05	Nails, Spikes, and Staples	
G.	Federal Specifications (Fed. Spec.):		
	MM-L-736C	Lumber; Hardwood	
Н.	I. Commercial Item Description (CID):		
	A-A-55615	Shield, Expansion (Wood Screw and Lag Bolt Self	
		Threading Anchors)	
I.	Military Specification (Mil. Spec.):		
	MIL-L-19140E	Lumber and Plywood, Fire-Retardant Treated	
J.	Truss Plate Institute (TPI):		
	TPI-85	Metal Plate Connected Wood Trusses	
K.	. U.S. Department of Commerce Product Standard (PS)		
		Construction and Industrial Plywood	
	PS 20-05	American Softwood Lumber Standard	

PART 2 - PRODUCTS

D 1 10 0 1 (D 200 1)

2.1 LUMBER:

- A. Unless otherwise specified, each piece of lumber bear grade mark, stamp, or other identifying marks indicating grades of material, and rules or standards under which produced.
 - 1. Identifying marks in accordance with rule or standard under which material is produced, including requirements for qualifications and authority of the inspection organization, usage of authorized identification, and information included in the identification.
 - 2. Inspection agency for lumber approved by the Board of Review, American Lumber Standards Committee, to grade species used.
- B. Lumber Other Than Structural:
 - 1. Unless otherwise specified, species graded under the grading rules of an inspection agency approved by Board of Review, American Lumber Standards Committee.
 - 2. Furring, blocking, nailers and similar items 100 mm (4 inches) and narrower Standard Grade; and, members 150 mm (6 inches) and wider, Number 2 Grade.
- D. Sizes:
 - 1. Conforming to Prod. Std., PS20.
 - 2. Size references are nominal sizes, unless otherwise specified, actual sizes within manufacturing tolerances allowed by standard under which produced.
- E. Moisture Content:
 - 1. At time of delivery and maintained at the site.
 - 2. Boards and lumber 50 mm (2 inches) and less in thickness: 19 percent or less.

- 3. Lumber over 50 mm (2 inches) thick: 25 percent or less.
- F. Fire Retardant Treatment:
 - 1. Mil Spec. MIL-L-19140 with piece of treated material bearing identification of testing agency and showing performance rating.
 - 2. Treatment and performance inspection, by an independent and qualified testing agency that establishes performance ratings.
- G. Preservative Treatment:
 - 1. Not Used.

2.2 ROUGH HARDWARE AND ADHESIVES:

- A. Miscellaneous Bolts: Expansion Bolts: C1D, A-A-55615; lag bolt, long enough to extend at least 65 mm (2-1/2 inches) into masonry or concrete. Use 13 mm (1/2 inch) bolt unless shown otherwise.
- B. Adhesives:
 - 1. For field-gluing plywood to lumber framing floor or roof systems: ASTM D3498.
 - 2. For structural laminated Wood: ASTM D2559.
- C. Screws:
 - 1. Wood to Wood: ANSI B18.6.1 or ASTM C1002.
 - 2. Wood to Steel: ASTM C954, or ASTM C1002.
- D. Nails:
 - 1. Size and type best suited for purpose unless noted otherwise. Use aluminum-alloy nails, plated nails, or zinc-coated nails, for nailing woodwork exposed to weather and on roof blocking.
 - 2. ASTM F1667:
 - a. Common: Type I, Style 10.
 - b. Concrete: Type I, Style 11.
 - c. Barbed: Type I, Style 26.
 - d. Underlayment: Type I, Style 25.
 - e. Masonry: Type I, Style 27.
 - f. Use special nails designed for use with ties, strap anchors, framing connectors, joists hangers, and similar items. Nails not less than 32 mm (1-1/4 inches) long, 8d and deformed or annularring shank.

PART 3 - EXECUTION

3.1 INSTALLATION OF FRAMING AND MISCELLANEOUS WOOD MEMBERS:

- A. Conform to applicable requirements of the following:
 - 1. AFPA National Design Specification for Wood Construction for timber connectors.
 - 2. AITC Timber Construction Manual for heavy timber construction.
 - 3. AFPA WCD-number 1, Manual for House Framing for nailing and framing unless specified otherwise.
 - 4. APA for installation of plywood or structural use panels.
 - 5. ASTM F 499 for wood underlayment.
 - 6. TPI for metal plate connected wood trusses.

B. Fasteners:

1. Nails.

- a. Nail in accordance with the Recommended Nailing Schedule as specified in AFPA Manual for House Framing where detailed nailing requirements are not specified in nailing schedule. Select nail size and nail spacing sufficient to develop adequate strength for the connection without splitting the members.
- b. Use special nails with framing connectors.
- c. For sheathing and subflooring, select length of nails sufficient to extend 25 mm (1 inch) into supports.
- d. Use eight penny or larger nails for nailing through 25 mm (1 inch) thick lumber and for toe nailing 50 mm (2 inch) thick lumber.
- e. Use 16 penny or larger nails for nailing through 50 mm (2 inch) thick lumber.

2. Bolts:

- a. Fit bolt heads and nuts bearing on wood with washers.
- b. Countersink bolt heads flush with the surface of nailers.
- c. Embed in concrete and solid masonry or use expansion bolts. Special bolts or screws designed for anchor to solid masonry or concrete in drilled holes may be used.
- C. Cut notch, or bore in accordance with NFPA Manual for House-Framing for passage of ducts wires, bolts, pipes, conduits and to accommodate other work. Repair or replace miscut, misfit or damaged work.
- D. Blocking Nailers, and Furring: Coordinate with all subs for blocking required prior to closing framed walls or ceilings.
 - 1. Install furring, blocking, nailers, and grounds where shown or reasonably inferred...
 - 2. Use longest lengths practicable.
 - 3. Use fire retardant treated wood blocking where shown at openings and where shown or specified.
 - 4. Layers of Blocking or Plates:
 - a. Stagger end joints between upper and lower pieces.
 - b. Nail at ends and not over 600 mm (24 inches) between ends.
 - c. Stagger nails from side to side of wood member over 125 mm (5 inches) in width.

--- E N D ---

SECTION 06 20 00 FINISH CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies interior millwork and solid surface window sills.
- B. Items specified.
 - Moldings and trim at existing windows
 - Base cap
 - Solid Surface as called for window sills

1.2 RELATED WORK

- A. Framing, furring and blocking: Section 06 10 00, ROUGH CARPENTRY.
- B. Color and texture of finish: Section 09 06 00, SCHEDULE FOR FINISHES.
- C. Electrical light fixtures and controls: Division 26, ELECTRICAL.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Shop Drawings:
 - 1. Millwork items Half full size scale for sections and details 1:50 (1/4-inch) for elevations and plans.
 - 2. Show construction and installation.

C. Samples:

Submit sample of wood specified with finish called for which will be used against completed work to confirm compliance. Base cap and window trim.

Submit sample of "solid surface" window sills in color and finish as noted which will be used against completed work to confirm compliance.

D. Certificates:

- 1. Indicating fire retardant treatment of materials meet the requirements where specified.
- 2. Indicating moisture content of materials meet the requirements specified.
- E. List of acceptable sealers for fire retardant materials where specified.
- F. Manufacturer's literature and data:
 - 1. Finish hardware
 - 2. Electrical components

1.4 DELIVERY, STORAGE AND HANDLING

- A. Protect lumber and millwork from dampness, maintaining moisture content specified both during and after delivery at site.
- B. Store finishing lumber and millwork in weathertight well ventilated structures or in space in existing buildings designated by COTR. Store at a minimum temperature of 21°C (70°F) for not less than 10 days before installation.
- C. Pile lumber in stacks in such manner as to provide air circulation around surfaces of each piece.

1.5 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Society of Testing and Materials
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126/126N/ 08	Str	notural Staal
A30/A30WI-U8		ucturai Steei

A53-07......Pipe, Steel, Black and Hot-Dipped Zinc Coated, Welded and

Seamless

A167-99 (R2009) Stainless and Heat-Resisting Chromium-Nickel Steel Plate,

Sheet, and Strip

B26/B26M-09......Aluminum-Alloy Sand Castings

Profiles, and Tubes

E84-09 Surface Burning Characteristics of Building Materials

C. American Hardboard Association (AHA):

A135.4-04.....Basic Hardboard

D. Builders Hardware Manufacturers Association (BHMA):

A156.9-03......Cabinet Hardware

A156.11-04.....Cabinet Locks

A156.16-02......Auxiliary Hardware

E. Hardwood Plywood and Veneer Association (HPVA):

HP1-09 Hardwood and Decorative Plywood

F. National Particleboard Association (NPA):

A208.1-99.....Wood Particleboard

G. American Wood-Preservers' Association (AWPA):

AWPA C1-03 All Timber Products – Preservative Treatment by Pressure

Processes

H. Architectural Woodwork Institute (AWI):

AWI-99...... Architectural Woodwork Quality Standards and Quality

Certification Program

I. National Electrical Manufacturers Association (NEMA):

LD 3-05 High-Pressure Decorative Laminates

J. U.S. Department of Commerce, Product Standard (PS):

PS20-05 American Softwood Lumber Standard

K. Military Specification (Mil. Spec):

MIL-L-19140E Lumber and Plywood, Fire-Retardant Treated

L. Federal Specifications (Fed. Spec.):

A-A-1922A.....Shield Expansion

A-A-1936.....Contact Adhesive

FF-S-111D(1)......Screw, Wood

MM-L-736(C) Lumber, Hardwood

PART 2 - PRODUCTS

2.1 LUMBER

A. Grading and Marking:

- 1. Lumber shall bear the grade mark, stamp, or other identifying marks indicating grades of material.
- 2. Such identifying marks on a material shall be in accordance with the rule or standard under which the material is produced, including requirements for qualifications and authority of the inspection organization, usage of authorized identification, and information included in the identification.
- 3. The inspection agency for lumber shall be approved by the Board of Review, American Lumber Standards Committee, to grade species used.

B. Sizes:

- 1. Lumber Size references, unless otherwise specified, are nominal sizes, and actual sizes shall be within manufacturing tolerances allowed by the standard under which product is produced.
- 2. Millwork, standing and running trim: Actual size as shown or specified.
- C. Hardwood: MM-L-736, species as specified for each item.
- D. Softwood: PS-20, exposed to view appearance grades: Select Maple:
 - 1. Use C select or D select, vertical grain for transparent finish including stain transparent finish.
 - 2. Use Prime for painted or opaque finish.
- E. Use edge grain Wood members exposed to weather.

2.2 PLYWOOD: NOT USED

2.4 PLASTIC LAMINATE: NOT USED

2.5 BUILDING BOARD (HARDBOARD) NOT USED

2.6 ADHESIVE

- A. For Plastic Laminate: Fed. Spec. A-A-1936.
- B. For Interior Millwork: Unextended urea resin, unextended melamine resin, phenol resin, or resorcinol resin.

2.7 STAINLESS STEEL

ASTM A167, Type 302 or 304.

2.8 ALUMINUM CAST

ASTM B26

2.9 ALUMINUM EXTRUDED

ASTM B221

2.10 HARDWARE

A. Rough Hardware:

- 1. Furnish rough hardware with a standard plating, applied after punching, forming and assembly of parts; galvanized, cadmium plated, or zinc-coated by electric-galvanizing process. Galvanized where specified.
- 2. Fasteners:
 - a. Bolts with Nuts: FF-N-836.
 - b. Expansion Bolts: A-A-1922A.
 - c. Screws: Fed. Spec. FF-S-111.
- B. Finish Hardware: provided as part of the Handrail/Crashrail assembly

Primers: Manufacturer's standard primer for steel providing baked enamel finish.

2.11 MOISTURE CONTENT

- A. Moisture content of lumber and millwork at time of delivery to site.
 - 1. Interior finish lumber, trim, and millwork 32 mm (1-1/4 inches) or less in nominal thickness: 12 percent on 85 percent of the pieces and 15 percent on the remainder.
 - 2. Moisture content of other materials shall be in accordance with the standards under which the products are produced.

2.12 FIRE RETARDANT TREATMENT

- A. Where wood members are specified to be fire retardant treated, the treatment shall be in accordance with Mil. Spec. MIL-L19140.
- B. Treatment and performance inspection shall be by an independent and qualified testing agency that establishes performance ratings.
- C. Each piece of treated material shall bear identification of the testing agency and shall indicate performance in accordance with such rating of flame spread and smoke developed.
- D. Treat wood for maximum flame spread of 25 and smoke developed of 25.

2.13 PRESERVATIVE TREATMENT

Wood members and plywood exposed to weather or in contact with plaster, masonry or concrete, including wood members used for rough framing of millwork items except heartwood Redwood and Western Red Cedar shall be preservative treated in accordance with AWPA Standards.

2.14 ACOUSTICAL PANEL: NOT USED

2.15 FABRICATION

A. General:

- 1. Except as otherwise specified, use AWI Custom Grade for architectural woodwork and interior millwork.
- 2. Finish woodwork shall be free from pitch pockets.
- 3. Except where special profiles are shown, trim shall be standard stock molding and members of the same species.
- 4. Fabricate members less than 4 m (14 feet) in length from one piece of lumber, back channeled and molded a shown.
- 5. Interior trim and items of millwork to be painted may be fabricated from jointed, built-up, or laminated members, unless otherwise shown on drawings or specified.
- 6. Round top edges and corners where exposed or called for in the drawings.

PART 3 - EXECUTION

3.1 ENVIRONMENTAL REQUIREMENTS

A. Maintain work areas and storage areas to a minimum temperature of 21°C (70°F) for not less than 10 days before and during installation of interior millwork.

B. Do not install finish lumber or millwork in any room or space where wet process systems such as concrete, masonry, or plaster work is not complete and dry.

3.2 INSTALLATION

A. General:

- 1. Millwork receiving transparent finish shall be primed and back-painted on concealed surfaces. Set no millwork until primed and back-painted.
- 2. Secure trim with fine finishing nails, screws, or glue as required.
- 3. Set nails for putty stopping. Use washers under bolt heads where no other bearing plate occurs.
- 4. Seal cut edges of preservative and fire retardant treated wood materials with a certified acceptable sealer.
- 5. Coordinate with plumbing and electrical work for installation of associated millwork items.
- 6. Plumb and level items unless shown otherwise.
- 7. Nail finish at each blocking, lookout, or other nailer and intermediate points; toggle or expansion bolt in place where nails are not suitable.
- 8. Where other than "finish" nails are used on exposed trim, countersink and plug all attachments with wood plug that matches wood used. Sand surface to align with surrounding finish

--- E N D ---

SECTION 08 11 13 HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies steel doors, steel frames and related components.
- B. Terms relating to steel doors and frames as defined in ANSI A123.1 and as specified.

1.2 RELATED WORK

- A. Frames fabricated of structural steel: Section 05 50 00, METAL FABRICATIONS.
- B. Door Hardware: Section 08 71 00, DOOR HARDWARE.
- C. Glazing: Section 08 80 00, GLAZING.

1.3 TESTING

An independent testing laboratory shall perform testing.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturers Literature and Data:
 - 1. Fire rated doors and frames, showing conformance with NFPA 80 and Underwriters Laboratory, Inc., or Intertek Testing Services or Factory Mutual fire rating requirements.
 - 2. Sound rated doors, including test report from Testing Laboratory.

1.5 SHIPMENT

- A. Prior to shipment label each door and frame to show location, size, door swing and other pertinent information.
- B. Fasten temporary steel spreaders across the bottom of each door frame.

1.6 STORAGE AND HANDLING

- A. Store doors and frames at the site under cover.
- B. Protect from rust and damage during storage and erection until completion.

1.7 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in the text by the basic designation only.

С.	Door and Hardware Institute (DHI):		
	All5 SeriesSteel Door and Frame Preparation for Hardware,		
	Series A115.1 through A115.17 (Dates Vary)		
D.	Steel Door Institute (SDI):		
	113-1979Apparent Thermal Performance for Steel Door and		
	Frame Assemblies		
	114-1979Acoustical Performance for Steel Door and Frame		
	Assemblies		
	A250.8-98Standard Steel Doors and Frames		
Ε.	American Society for Testing and Materials (ASTM):		
	A167-99(R2004)Stainless and Heat-Resisting Chromium-Nickel		
	Steel Plate, Sheet, and Strip		
	A568/568-M-07Steel, Sheet, Carbon, and High-Strength, Low-		
	alloy, Hot-Rolled and Cold-Rolled		
	A1008-07Steel, sheet, Cold-Rolled, Carbon, Structural,		
	High Strength Low Alloy and High Strength Low		
	Alloy with Improved Formability		
	B209/209M-09Aluminum and Aluminum-Alloy Sheet and Plate		
	B221/221M-06Aluminum and Aluminum-Alloy Extruded Bars,		
	Rods, Wire, Profiles and Tubes		
	D1621-04Compressive Properties of Rigid Cellular		
	Plastics		
	D3656-04Insect Screening and Louver Cloth Woven from		
	Vinyl Coated Glass Yarns		
	E90-04Laboratory Measurement of Airborne Sound		
	Transmission Loss of Building Partitions		
F.	The National Association Architectural Metal Manufactures (NAAMM):		
	Metal Finishes Manual (1988 Edition)		
G.	National Fire Protection Association (NFPA):		
	80-08Fire Doors and Fire Windows		
Н.	Underwriters Laboratories, Inc. (UL):		
	Fire Resistance Directory		
I.	<pre>Intertek Testing Services (ITS):</pre>		
	Certifications ListingsLatest Edition		
J.	Factory Mutual System (FM):		

Approval Guide

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Sheet: ASTM B209/209M.
- B. Sheet Steel: ASTM A1008, cold-rolled for panels (face sheets) of doors.
- C. Anchors, Fastenings and Accessories: Fastenings anchors, clips connecting members and sleeves from zinc coated steel.
- D. Aluminum, Extruded: ASTM B221/221M.
- E. Prime Paint: Paint that meets or exceeds the requirements of A250.8.

2.2 DOOR FABRICATION

A. GENERAL:

- Follow SDI A250.8 for fabrication of standard steel doors, except as specified otherwise. Doors to receive hardware specified in Section 08 71 00, DOOR HARDWARE. Tolerances as per SDI A250.8. Thickness, 44 mm (1-3/4 inches), unless otherwise shown.
- 2. Close top edge of exterior doors flush and seal to prevent water intrusion.
- 3. When vertical steel stiffeners are used for core construction, fill spaces between stiffeners with mineral fiber insulation.
- B. Standard Duty Doors: SDI A250.8, Level 1, Model 2 of size and design shown. Use for interior locations only. Do not use for stairwell doors, security doors and detention doors.
- C. Heavy Duty Doors: SDI A250.8, Level 2, Model 2 of size and design shown. Core construction types a, d, or f, for interior doors, and, types b, c, e, or f, for exterior doors.
- D. Extra Heavy Duty Doors: SDI A250.8, Level 3, Model 2 of size and design shown. Core construction Types d or f, for interior doors, and Types b, c, e, or f, for exterior doors. Use for stairwell doors and security doors.

E. Smoke Doors:

- 1. Close top and vertical edges flush.
- 2. Provide seamless vertical edges.
- 3. Apply Steel astragal to the meeting style at the active leaf of pair of doors or double egress doors.
- 4. Provide clearance at head, jamb and sill as specified in NFPA 80.
- F. Fire Rated Doors (Labeled):
 - 1. Conform to NFPA 80 when tested by Underwriters Laboratories, Inc., Inchcape Testing Services, or Factory Mutual for the class of door or door opening shown.

- 2. Fire rated labels of metal, with raised or incised markings of approving laboratory shall be permanently attached to doors.
- 3. Close top and vertical edges of doors flush. Vertical edges shall be seamless. Apply steel astragal to the meeting stile of the active leaf of pairs of fire rated doors, except where vertical rod exit devices are specified for both leaves swinging in the same direction.
- 4. Construct fire rated doors in stairwell enclosures for maximum transmitted temperature rise of 230 $^{\circ}$ C (450 $^{\circ}$ F) above ambient temperature at end of 30 minutes of fire exposure when tested in accordance with ASTM E152.

2.3 FRAME FABRICATION

A. General:

- 1. SDI A250.8, 1.3 mm (0.053 inch) thick sheet steel, types and styles as shown or scheduled.
- 2. Frames for exterior doors: Fabricate from 1.7 mm (0.067 inch) thick galvanized steel conforming to ASTM A525.
- 3. Frames for labeled fire rated doors.
 - a. Comply with NFPA 80. Test by Underwriters Laboratories, Inc., Inchcape Testing Services, or Factory Mutual.
 - b. Fire rated labels of approving laboratory permanently attached to frames as evidence of conformance with these requirements. Provide labels of metal or engraved stamp, with raised or incised markings.
- 4. Frames for doors specified to have automatic door operators; minimum $1.7 \ \text{mm} \ (0.067 \ \text{inch}) \ \text{thick}.$
- 5. Knocked-down frames are not acceptable.

B. Reinforcement and Covers:

- 1. SDI A250.8 for, minimum thickness of steel reinforcement welded to back of frames.
- 2. Provide mortar guards securely fastened to back of hardware reinforcements.

C. Glazed Openings:

- a. Integral stop on exterior or corridor side of door.
- b. Design rabbet width and depth to receive glazing material or panel shown or specified.

D. Frame Anchors:

1. Floor anchors:

- a. Where floor fills occur, provide extension type floor anchors to compensate for depth of fill.
- b. At bottom of jamb use 1.3 mm (0.053 inch) thick steel clip angles welded to jamb and drilled to receive two 6 mm (1/4 inch) floor bolts. Use 50 mm x 50 mm (2 inch by 2 inch) 9 mm by (3/8 inch) clip angle for lead lined frames, drilled for 9 mm (3/8 inch) floor bolts.
- c. Where mullions occur, provide 2.3 mm (0.093 inch) thick steel channel anchors, drilled for two 6 mm (1/4 inch) floor bolts and frame anchor screws.
- d. Where sill sections occur, provide continuous 1 mm (0.042 inch) thick steel rough bucks drilled for 6 mm (1/4 inch) floor bolts and frame anchor screws. Space floor bolts at 50 mm (24 inches) on center.

2. Jamb anchors:

- a. Locate anchors on jambs near top and bottom of each frame, and at intermediate points not over 600 mm (24 inches) apart, except for fire rated frames space anchors as required by labeling authority.
- b. Form jamb anchors of not less than 1 mm (0.042 inch) thick steel unless otherwise specified.
- c. Anchors set in masonry: Use adjustable anchors designed for friction fit against the frame and for extension into the masonry not less than 250 mm (10 inches). Use one of following type:
 - 1) Wire loop type of 5 mm (3/16 inch) diameter wire.
 - 2) T-shape or strap and stirrup type of corrugated or perforated sheet steel.
- d. Anchors for stud partitions: Either weld to frame or use lock-in snap-in type. Provide tabs for securing anchor to the sides of the studs.
- e. Anchors for frames set in prepared openings:
 - 1) Steel pipe spacers with 6 mm (1/4 inch) inside diameter welded to plate reinforcing at jamb stops or hat shaped formed strap spacers, 50 mm (2 inches) wide, welded to jamb near stop.
 - 2) Drill jamb stop and strap spacers for 6 mm (1/4 inch) flat head bolts to pass thru frame and spacers.
 - 3) Two piece frames: Subframe or rough buck drilled for 6 mm (1/4 inch) bolts.

- f. Anchors for observation windows and other continuous frames set in stud partitions.
 - 1) In addition to jamb anchors, weld clip anchors to sills and heads of continuous frames over 1200 mm (4 feet) long.
 - 2) Anchors spaced 600 mm (24 inches) on centers maximum.
- g. Modify frame anchors to fit special frame and wall construction and provide special anchors where shown or required.

2.4 LOUVERS

A. General:

- 1. Sight proof type with stationary blades the full thickness of the door.
- 2. Design lightproof louvers to exclude passage of light but permit free ventilation.
- 3. Provide insect screen and wire guards at exterior doors, except where doors are located below completely enclosed areaways, the wire guard is not required.

B. Fabrication:

- 1. Steel louvers 0.8 mm (0.032 inch) thick for interior doors, and 1.3 mm (0.053 inch) inch thick for exterior doors.
- 2. Fabricate louvers as complete units. Install in prepared cutouts in doors.
- 3. Weld stationary blades to frames. Weld louvers into door openings.

2.5 SHOP PAINTING

SDI A250.8.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Plumb, align and brace frames securely until permanent anchors are set.
 - 1. Use triangular bracing near each corner on both sides of frames with temporary wood spreaders at midpoint.
 - 2. Use wood spreaders at bottom of frame if the shipping spreader is removed.
 - 3. Protect frame from accidental abuse.
 - 4. Where construction will permit concealment, leave the shipping spreaders in place after installation, otherwise remove the spreaders after the frames are set and anchored.
 - 5. Remove wood spreaders and braces only after the walls are built and jamb anchors are secured.

B. Floor Anchors:

- 1. Anchor the bottom of door frames to floor with two 6 mm (1/4 inch) diameter expansion bolts. Use 9 mm (3/8 inch) bolts on lead lined frames.
- 2. Power actuated drive pins may be used to secure frame anchors to concrete floors.

C. Jamb Anchors:

- Anchors in masonry walls: Embed anchors in mortar. Fill space between frame and masonry wall with grout or mortar as walls are built.
- 2. Coat frame back with a bituminous coating prior to lining of grout filling in masonry walls.
- 3. Secure anchors to sides of studs with two fasteners through anchor tabs. Use steel drill screws to steel studs.
- 4. Frames set in prepared openings of masonry or concrete: Expansion bolt to wall with 6 mm (1/4 inch) expansion bolts through spacers. Where subframes or rough bucks are used, 6 mm (1/4 inch) expansion bolts on 600 mm (24 inch) centers or power activated drive pins 600 mm (24 inches) on centers. Secure two piece frames to subframe or rough buck with machine screws on both faces.
- D. Install anchors for labeled fire rated doors to provide rating as required.
- E. Frames for Sound Rated Doors: Coordinate to line frames for sound rated doors with insulation.
- F. Overhead Bracing (Lead Lined Frames): Where jamb extensions extend to structure above, anchor clip angles with not less than two, 9 mm (3/8 inch) expansion bolts or power actuated drive pins to concrete slab. Weld to steel overhead members.

3.2 INSTALLATION OF DOORS AND APPLICATION OF HARDWARE

Install doors and hardware as specified in Sections Section 08 11 13, HOLLOW METAL DOORS AND FRAMES, Section 08 14 00, WOOD DOORS, Section 08 71 00, DOOR HARDWARE.

- - - E N D - - -

SECTION 08 14 00 INTERIOR WOOD DOORS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies interior flush doors which will have Acrovyn sheet applied as finish, See Division 9.
- B. This section includes new finish on existing doors throughout the Connecting Corridors, their intersections and all Building Hubs. New finish will be Acrovyn sheet applied as finish, See Division 9.
- C. Section includes fire rated and smoke barrier doors where it is determined doors are in rated partitions.

1.2 RELATED WORK

- A. Metal door frames: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES.
- B. Door hardware including hardware location (height): Section 08 71 00, DOOR HARDWARE.
- C. Installation of doors and hardware: Section 08 11 13, HOLLOW METAL DOORS AND FRAMES, Section 08 14 00, WOOD DOORS, or Section 08 71 00, DOOR HARDWARE.
- D. Finish: Section 09 06 00, SCHEDULE FOR FINISHES.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Shop Drawings:
 - 1. Show every door in project and schedule location in building.
 - 2. Indicate if new or existing and type, grade, finish and size.
 - 3. Provide information concerning specific requirements not included in the manufacturer's literature and data submittal.
- D. Manufacturer's Literature and Data for new doors:
 - 1. Labeled fire rated doors showing conformance with NFPA 80.
- E. Laboratory Test Reports for new doors:
 - 1. Screw holding capacity test report in accordance with WDMA T.M.10.
 - 2. Split resistance test report in accordance with WDMA T.M.5.
 - 3. Cycle/Slam test report in accordance with WDMA T.M.7.
 - 4. Hinge-Loading test report in accordance with WDMA T.M.8.

1.4 WARRANTY

- A. New Doors are subject to terms of Article titled "Warranty of Construction", FAR clause 52.246-21, except that warranty shall be as follows:
 - 1. For all new interior doors, manufacturer's warranty for lifetime of original installation.

1.5 DELIVERY AND STORAGE (NEW DOORS)

- A. Factory seal doors and accessories in minimum of 6 mill polyethylene bags or cardboard packages which shall remain unbroken during delivery and storage.
- B. Store in accordance with WDMA I.S.1-A, J-1 Job Site Information.
- C. Label package for door opening where used.

1.6 APPLICABLE PUBLICATIONS (NEW DOORS)

Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.

B.	. Window and Door Manufacturers Association (WDMA):		
	I.S.1-A-04	Architectural Wood Flush Doors	
	I.S.4-07A	Water-Repellent Preservative Non-Pressure Treatment for	
		Millwork	
	I.S.6A-01	Architectural Wood Stile and Rail Doors	
	T.M.5-90	Split Resistance Test Method	
	T.M.6-08	Adhesive (Glue Bond) Durability Test Method	
	T.M.7-08	Cycle-Slam Test Method	
	T.M.8-08	Hinge Loading Test Method	
	T.M.10-08	Screwholding Test Method	
C.	National Fire Protection Asso	ociation (NFPA):	
	80-07	Protection of Buildings from Exterior Fire	
	252-08	Fire Tests of Door Assemblies	
D.	ASTM International (ASTM)):	
	E90-04	Laboratory Measurements of Airborne Sound Transmission	
		Loss	

PART 2 – PRODUCTS (NEW DOORS)

2.1 FLUSH DOORS

- A. General:
 - 1. Meet requirements of WDMA I.S.1-A, Extra Heavy Duty.
 - 2. Adhesive: Type II
 - 3. Thickness: 45 mm (1-3/4 inches) unless otherwise shown or specified.
 - B. Face Veneer:
 - 1. In accordance with WDMA I.S.1-A.
 - 2. One species throughout the project unless scheduled or otherwise shown.
 - 3. Factory sand doors for finishing.
 - C. Fire rated wood doors:
 - 1. Fire Performance Rating:
 - a. "B" label, 1-1/2 hours.
 - b. "C" label, 3/4 hour.
 - 2. Labels:
 - a. Doors shall conform to the requirements of ASTM E2074, or NFPA 252, and, carry an identifying label from a qualified testing and inspection agency for class of door or opening shown designating fire performance rating.
 - b. Metal labels with raised or incised markings.

- 3. Performance Criteria for Stiles of doors utilizing standard mortise leaf hinges:
 - a. Hinge Loading: WDMA T.M.8. Average of 10 test samples for Extra Heavy Duty doors.
 - b. Direct screw withdrawal: WDMA T.M.10 for Extra Heavy Duty doors. Average of 10 test samples using a steel, fully threaded #12 wood screw.
 - Cycle Slam: 1,000,000 cycles with no loose hinge screws or other visible signs of failure when tested in accordance with WDMA T.M.7.
- 4. Additional Hardware Reinforcement:
 - a. Provide fire rated doors with hardware reinforcement blocking.
 - b. Size of lock blocks as required to secure hardware specified.
 - c. Top, bottom and intermediate rail blocks shall measure not less than 125 mm (five inches) minimum by full core width.
 - d. Reinforcement blocking in compliance with manufacturer's labeling requirements.
 - e. Mineral material similar to core is not acceptable.
- 5. Other Core Components: Manufacturer's standard as allowed by the labeling requirements.
- 6. Provide steel astragal where doors are in pairs.
- F. Smoke Barrier Doors: Where doors are in an existing Smoke Barrier:
 - 1. Provide a steel astragal on one leaf of pairs of doors, including double egress doors.
 - 2. Accessories:
 - a. Frame Gaskets: Continuous closed cell sponge neoprene with stop adjusters.
 - b. Automatic Door Bottom Seal:
 - 1) Steel spring operated, closed cell sponge neoprene metal mounted removable in extruded aluminum housing with a medium matte 0.1 mm (4.0 mil) thick clear Anodized finish.
 - 2) Concealed or Surface Mounted.

2.2 AND 2.3 NOT USED

2.4 IDENTIFICATION MARK:

- A. On top edge of door.
- B. Either a stamp, brand or other indelible mark, giving manufacturer's name, door's trade name, construction of door, code date of manufacture and quality.
- C. Accompanied by either of the following additional requirements:
 - 1. An identification mark or a separate certification including name of inspection organization.
 - 2. Identification of standards for door, including glue type.
 - 3. Identification of veneer and quality certification.
 - 4. Identification of preservative treatment for stile and rail doors.

2.5 SEALING:

Give top and bottom edge of doors two coats of catalyzed polyurethane or water resistant sealer before sealing in shipping containers.

PART 3 – EXECUTION (NEW DOORS, EXCEPT AS NOTED IN PARAGRAPH H.)

3.1 DOOR PREPARATION

- A. Field, shop or factory preparation: Do not violate the qualified testing and inspection agency label requirements for fire rated doors.
- B. Clearances between Doors and Frames and Floors:
 - 1. Maximum 3 mm (1/8 inch) clearance at the jambs, heads, and meeting stiles, and a 19 mm (3/4 inch) clearance at bottom, except as otherwise specified.
 - 2. Maximum clearance at bottom of sound rated doors, light-proofed doors, doors to operating rooms, and doors designated to be fitted with mechanical seal: 10 mm (3/8 inch).
- C. Provide cutouts for special details required and specified.
- D. Rout doors for hardware using templates and location heights specified in Section, 08 71 00 DOOR HARDWARE.
- E. Fit doors to frame, bevel lock edge of doors 3 mm (1/8 inch) for each 50 mm (two inches) of door thickness undercut where shown.
- F. Immediately after fitting and cutting of doors for hardware, seal cut edges of doors with two coats of water resistant sealer.
- G. Finish surfaces, including both faces, top and bottom and edges of the doors smooth to touch.
- H. EXISTING DOORS: New Acrovyn finish (see Division 9) to be applied to existing doors will be done in the field and be held to a similar standard unless otherwise approved by the COTR.
- I. Apply a steel astragal on the opposite side of active door on pairs of fire rated doors.
- J. Apply a steel astragal to meeting style of active leaf of pair of doors or double egress smoke doors.

3.2 INSTALLATION OF DOORS APPLICATION OF HARDWARE

Install doors and hardware as specified in this Section.

3.3 DOOR PROTECTION

- A. As door installation is completed, place polyethylene bag or cardboard shipping container over door and tape in place.
- B. Provide protective covering over knobs and handles in addition to covering door.
- C. Maintain covering in good condition until removal is approved by Resident Engineer.

--- E N D ---

SECTION 08 71 00 DOOR HARDWARE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Door hardware and related items necessary for complete installation and operation of the doors and the gate.

1.2 RELATED WORK

- A. Caulking: See Paint Section 09 91 00.
- B. Hollow Metal Door and Frame, Section 08 11 13
- C. Painting: Section 09 91 00, PAINTING.

1.3 GENERAL

- A. All hardware shall comply with UFAS, (Uniform Federal Accessible Standards) unless specified otherwise.
- B. Hardware selected shall match existing door hardware both in manufacturer and type, in similar or same operation, at this campus, and as approved by the COTR.
- C. Hardware for Exit Doors: Conform to requirements of NFPA 80 for labeled fire doors and to NFPA 101 for exit doors, as well as to other requirements specified. Provide hardware listed by UL, except where heavier materials, large size, or better grades are specified herein under paragraph HARDWARE SETS. In lieu of UL labeling and listing, test reports from a nationally recognized testing agency may be submitted showing that hardware has been tested in accordance with UL test methods and that it conforms to NFPA requirements.
- D. Hardware for application on door and frames shall be made to standard templates. Furnish templates to the fabricator of these items in sufficient time so as not to delay the construction.
- E. The following items shall be of the same manufacturer, if possible, except as otherwise specified:
 - 1. locksets.
 - 2. Hinges for hollow metal doors.
 - 3. Surface applied overhead door and gate closers.
 - 4. Exit devices.

1.4 WARRANTY

- A. As noted here:
 - 1. Locks, latchsets, and panic hardware: 5 years.
 - 2. Closers: 10 years.

1.5 MAINTENANCE MANUALS

A. In accordance with Section 01 00 00, GENERAL REQUIREMENTS Article titled "INSTRUCTIONS", furnish maintenance manuals and instructions on all hardware.

1.6 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. Submit 6 copies of the schedule per Section 01 33 23 plus 2 copies to the VAMC Locksmith (VISN Locksmith if the VAMC does not have a locksmith).

B. Hardware Schedule: Prepare and submit hardware schedule in the following form: Add door location and use served along with each schedule.

Hardware Item	Quantity	Size	Reference Publication Type No.	Finish	Mfr. Name and Catalog No.	Key Control Symbols	UL Mark (if fire rated and listed)	ANSI/BHM A Finish Designation

- C. Samples and Manufacturers' Literature:
 - 1. Samples: All hardware items (proposed for the project) that have not been previously approved by Builders Hardware Manufacturers Association shall be submitted for approval. Tag and mark all items with manufacturer's name, catalog number and project number.
 - 2. Samples are not required for hardware listed in the specifications by manufacturer's catalog number, if the contractor proposes to use the manufacturer's product specified.
- D. Certificate of Compliance and Test Reports: Submit certificates that hardware conforms to the requirements specified herein. Certificates shall be accompanied by copies of reports as referenced. The testing shall have been conducted either in the manufacturer's plant and certified by an independent testing laboratory or conducted in an independent laboratory, within four years of submittal of reports for approval.

1.7 DELIVERY AND MARKING

A. Deliver items of hardware to job site in their original containers, complete with necessary appurtenances including screws, keys, and instructions. Tag one of each different item of hardware and deliver to COTR for reference purposes. Tag shall identify items by Project Specification number and manufacturer's catalog number. These items shall remain on file in COTR's office until all other similar items have been installed in project, at which time the COTR will deliver items on file to Contractor for installation in predetermined locations on the project.

1.8 PREINSTALLATION MEETING

- A. Convene a pre-installation meeting not less than 30 days before start of installation of door hardware. Require attendance of parties directly affecting work of this section, including Contractor and Installer, Architect, COTR and VA Locksmith, Hardware Consultant, and Hardware Manufacturer's Representative. Review the following:
 - 1. Inspection of door hardware.
 - 2. Job and surface readiness.
 - 3. Coordination with other work.
 - 4. Protection of hardware surfaces.
 - 5. Substrate surface protection.
 - 6. Installation.
 - 7. Adjusting.
 - 8. Repair.

- 9. Field quality control.
- 10. Cleaning.

1.9 INSTRUCTIONS

- A. Hardware Set Symbols on Drawings: Except for protective plates, door stops, mutes, thresholds and the like specified herein, hardware requirements for each door are indicated herein. Symbols for hardware sets consist of letters (e.g., "HW") followed by a number. Each number designates a set of hardware items applicable to a door type.
- B. Manufacturers' Catalog Number References: Where manufacturers' products are specified herein, products of other manufacturers which are considered equivalent to those specified may be used. Manufacturers whose products are specified are identified by abbreviations as follows:

Adams-Rite	Adams Rite Mfg. Co.	Pomona, CA
Best	Best Access Systems	Indianapolis, IN
Don-Jo	Don-Jo Manufacturing	Sterling, MA
G.E. Security	GE Security, Inc.	Bradentown, FL
Markar	Markar Architectural Products	Pomona, CA
Pemko	Pemko Manufacturing Co.	Ventura, CA
Rixson	Rixson	Franklin Park, IL
Rockwood	Rockwood Manufacturing Co.	Rockwood, PA
Securitron	Securitron Magnalock Corp.	Sparks, NV
Southern Folger	Southern Folger Detention Equipment Co.	San Antonio, TX
Stanley	The Stanley Works	New Britain, CT
Tice	Tice Industries	Portland, OR
Trimco	Triangle Brass Mfg. Co.	Los Angeles, CA
Zero	Zero Weather Stripping Co.	New York, NY

- C. Keying: All cylinders shall be keyed into existing Key System . Provide removable core cylinders that are removable only with a special key or tool without disassembly of knob or lockset. Cylinders shall be 6 pin type. Keying information shall be furnished at a later date by the COTR.
- D. Keying: Shall fit into existing key system. It shall be small format (Best size and profile) removable core type as previously described. The key blanks shall be protected by a utility patent with a minimum seven years remaining on the patent from the start of construction, and protected by contract-controlled distribution. The manufacturer shall furnish code pattern listings in both paper and electronic formats so keys may be reproduced by code; provide electronic format in file type required by project's key control software.
 - 1. Keying information will be furnished to the Contractor by the COTR.

2. Supply information regarding key control of cylinder locks to manufacturers of equipment having cylinder type locks. Notify COTR immediately when and to whom keys or keying information is supplied. Return all such keys to the COTR.

1.10 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. In text, hardware items are referred to by series, types, etc., listed in such specifications and standards, except as otherwise specified.
- B. American Society for Testing and Materials (ASTM):

E2180-07.....Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) In Polymeric or

Hydrophobic Materials

C. American National Standards Institute/Builders Hardware Manufacturers Association

(ANSI/BHMA):	
A156.1-06	Butts and Hinges
A156.2-03	Bored and Pre-assembled Locks and Latches
A156.3-08	Exit Devices, Coordinators, and Auto Flush Bolts
A156.4-08	Door Controls (Closers)
A156.5-01	Auxiliary Locks and Associated Products
A156.6-05	Architectural Door Trim
A156.8-05	Door Controls-Overhead Stops and Holders
	Interconnected Locks and Latches
A156.13-05	Mortise Locks and Latches Series 1000
A156.14-07	Sliding and Folding Door Hardware
A156.15-06	Release Devices-Closer Holder, Electromagnetic and
	Electromechanical
A156.16-08	
A156.17-04	Self-Closing Hinges and Pivots
A156.18-06	Materials and Finishes
A156.20-06	Strap and Tee Hinges, and Hasps

A156.22-05Door Gasketing and Edge Seal Systems

A156.28-07Master Keying Systems

A250.8-03Standard Steel Doors and Frames

D. National Fire Protection Association (NFPA):

80-10Fire Doors and Fire Windows

101-09Life Safety Code

E. Underwriters Laboratories, Inc. (UL):

Building Materials Directory (2008)

PART 2 - PRODUCTS

2.1 BUTT HINGES

A. ANSI A156.1. Provide only three-knuckle hinges, except five-knuckle where the required hinge type is not available in a three-knuckle version (e.g., some types of swing-clear

hinges). The following types of butt hinges shall be used for the types of doors listed, except where otherwise specified:

- B. Provide quantity and size of hinges per door leaf as follows:
 - 1. Doors over 900 mm (3 feet) to 1065 mm (3 feet 6 inches) wide, standard weight: 127 mm x 114 mm (5 inches x 4-1/2 inches).

2.2 CONTINUOUS HINGES (NOT USED)

2.3 DOOR CLOSING DEVICES

A. Closing devices shall be products of one manufacturer. For each type specified

2.4 OVERHEAD CLOSERS

- A. Conform to ANSI A156.4, Grade 1.
- B. Closers shall conform to the following:
 - 1. The closer shall have minimum 50 percent adjustable closing force over minimum value for that closer and have adjustable hydraulic back check effective between 60 degrees and 85 degrees of door opening.
 - 2. Closer shall have hold-open feature.
 - 3. Material of closer body shall be forged or cast.
 - 4. Arm and brackets for closers shall be steel, malleable iron or high strength ductile cast iron.
 - 5. Where closers are <u>exposed to the exterior</u> or are mounted in rooms that experience high humidity, provide closer body and arm assembly of stainless steel material.
 - 6. Closers shall have full size metal cover; plastic covers will not be accepted.
 - 7. Closers shall have adjustable hydraulic back-check, separate valves for closing and latching speed, adjustable back-check positioning valve, and adjustable delayed action valve.
 - 8. Provide closers with any accessories required for the mounting application, including (but not limited to) drop plates, special soffit plates, spacers for heavy-duty parallel arm fifth screws, bull-nose or other regular arm brackets, longer or shorter arm assemblies, and special factory templating. Provide special arms, drop plates, and templating as needed to allow mounting at doors with overhead stops and/or holders.
 - 9. Closer arms or backcheck valve shall not be used to stop the door from overswing, except in applications where a separate wall, floor, or overhead stop cannot be used.
 - 10. Provide parallel arm closers with heavy duty rigid arm.
 - 11. Where closers are to be installed on the push side of the door, provide parallel arm type except where conditions require use of top jamb arm.
 - 12. Provide all surface closers with the same body attachment screw pattern for ease of replacement and maintenance.
 - 13. All closers shall have a 1 ½" (38mm) minimum piston diameter.

2.5 FLOOR CLOSERS AND FLOOR PIVOT SETS (NOT USED)

2.6 COMBINATION CLOSER – HOLDER (NOT USED)

2.7 DOOR STOPS

- A. Conform to ANSI A156.16.
- B. Provide door stops wherever an opened door or any item of hardware thereon would strike a wall, column, equipment or other parts of building construction. For concrete, masonry, use lead expansion shields for mounting door stops.
- C. Where cylindrical locks with turn pieces or pushbuttons occur, equip wall bumpers Type L02251 (rubber pads having concave face) to receive turn piece or button.
- D. Provide stop Type L02011, as applicable for exterior doors. At outswing doors where stop can be installed in concrete, provide stop mated to concrete anchor set in 76mm (3-inch) core-drilled hole and filled with quick-setting cement.
- E. Omit stops where floor mounted door holders are required and where automatic operated doors occur.

2.8 OVERHEAD DOOR STOPS AND HOLDERS (NOT USED)

2.9 DOOR HOLDERS: Match existing for similar application.

2.10 LOCKS AND LATCHES

- A. Conform to ANSI A156.2. Locks and latches for doors 45 mm (1-3/4 inch) thick or over shall have beveled fronts Provide temporary keying device or construction core of allow opening and closing during construction and prior to the installation of final cores.
- B. In addition to above requirements, locks and latches shall comply with following requirements:
 - 1. Cylindrical Lock and Latch Sets: levers shall meet ADA (Americans with Disabilities Act) requirements. Cylindrical locksets shall be series 4000 Grade I. All locks and latchsets shall be furnished with 122.55 mm (4-7/8-inch) curved lip strike and wrought box. Provide lever design to match existing lever design and as approved by the COTR. Where two turn pieces are specified for lock F76, turn piece on inside knob shall lock and unlock inside knob, and turn piece on outside knob shall unlock outside knob when inside knob is in the locked position. (This function is intended to allow emergency entry into these areas without an emergency key or any special tool.)
 - 3. Auxiliary locks shall be as specified under hardware sets and conform to ANSI A156.5.

2.11 PUSH-BUTTON COMBINATION LOCKS (NOT USED)

- **2.12 ELECTROMAGNETIC LOCKS**: Replace existing locks used in North and South Sides of all Building HUBs. Mounting to be on latch side of door, away from Corridor. Submit cut sheet and details to COTR for review and approval.
- **2.13 ELECTRIC STRIKES:** Change only as required for changing Magnetic locks.

2.14 KEYS

A. Stamp all keys with change number and key set symbol. Furnish keys in quantities as follows:

Locks/Keys	Quantity	
Cylinder locks	2 keys each	

Cylinder lock change key blanks	100 each different key way
Master-keyed sets	6 keys each
Grand Master sets	6 keys each
Great Grand Master set	5 keys
Control key	2 keys

2.15 KEY CABINET (NOT USED)

2.16 ARMOR PLATES, KICK PLATES, MOP PLATES AND DOOR EDGING (NOT USED)

2.17 EXIT DEVICES

- A. Conform to ANSI Standard A156.3. Exit devices shall be Grade 1; type and function are specified in hardware sets. Trim shall have cast satin stainless steel lever handles of design similar to locksets, unless otherwise specified. Provide key cylinders for keyed operating trim and, where specified, cylinder dogging.
- B. Do not provide surface vertical rod panics at exterior doors.
- C. Where concealed vertical rod panics are specified at exterior doors, provide with top rod.
- C. At non-rated openings with panic hardware, provide panic hardware with key cylinder dogging feature.
- D. Exit devices for fire doors shall comply with Underwriters Laboratories, Inc., requirements for Fire Exit Hardware. Submit proof of compliance.

2.18 FLUSH BOLTS (LEVER EXTENSION) (NOT USED)

- 2.19 FLUSH BOLTS (AUTOMATIC) (NOT USED)
- 2.20 DOOR PULLS (NOT USED)
- 2.21 PUSH PLATES (NOT USED)
- 2.22 COMBINATION PUSH AND PULL PLATES (NOT USED)
- 2.23 COORDINATORS (NOT USED)
- 2.24 THRESHOLD AT SLIDING DOOR (NOT USED)
- 2.26 WEATHERSTRIPS (FOR EXTERIOR DOORS) (NOT USED)
- 2.27 MISCELLANEOUS HARDWARE 9NOT USED)
- 2.28 PADLOCKS FOR VARIOUS DOORS, GATES AND HATCHES(NOT USED)
- 2.29 THERMOSTATIC TEMPERATURE CONTROL VALVE CABINETS
- 2.30 HINGED WIRE GUARDS (FOR WINDOWS, DOORS AND TRANSOMS) AND WIRE PARTITION DOORS (NOT USED)

2.31 FINISHES

A. Exposed surfaces of hardware shall match existing hardware in similar use and have ANSI A156.18, finishes as specified below. Finishes on all hinges, pivots, closers,

- thresholds, etc., shall be as specified below under "Miscellaneous Finishes." For field painting (final coat) of ferrous hardware, see Section 09 91 00, PAINTING.
- B. 626 or 630: All surfaces on exterior and interior of buildings, except where other finishes are specified.
- C. Miscellaneous Finishes:
 - 1. Hinges --exterior doors: 626 or 630.
 - 2. Pivots: Match door trim.
 - 4. Door Closers: Factory applied paint finish. Dull or Satin Aluminum color. Stainless Steel at exterior
 - 5. Thresholds: Mill finish aluminum.
 - 6. Other primed steel hardware: 600.
- D. Hardware Finishes for Existing Buildings: U.S. Standard finishes shall match finishes of hardware in (similar) existing spaces except where otherwise specified.
- E. Special Finish: Exposed surfaces of hardware for dark bronze anodized aluminum doors shall have oxidized oil rubbed bronze finish (dark bronze) finish on door closers shall closely match doors.
- F. Anti-microbial Coating: All hand-operated hardware (levers, pulls, push bars, push plates, paddles, and panic bars) shall be provided with an anti-microbial/anti-fungal coating that has passed ASTM E2180 tests. Coating to consist of ionic silver (Ag+). Silver ions surround bacterial cells, inhibiting growth of bacteria, mold, and mildew by blockading food and respiration supplies.

2.32 BASE METALS

A. Apply specified U.S. Standard finishes on different base metals as following:

Finish	Base Metal	
652	Steel	
626	Brass or bronze	
630	Stainless steel	

PART 3 - EXECUTION

3.1 HARDWARE HEIGHTS

- A. For existing buildings locate hardware on doors at heights to match existing hardware. The Contractor shall visit the site, verify location of existing hardware and submit locations to VA COTR for approval.
- B. Hardware Heights from Finished Floor:
 - 1. Exit devices centerline of strike (where applicable) 1024 mm (40-5/16 inches).
 - 2. Locksets and latch sets centerline of strike 1024 mm (40-5/16 inches).
 - 3. Deadlocks centerline of strike 1219 mm (48 inches).

3.2 INSTALLATION

A. At exterior doors, closers shall be mounted on interior side. Where closers are mounted on doors they shall be mounted with sex nuts and bolts; foot shall be fastened to frame with machine screws.

B. Hinge Size Requirements:

Door Thickness	Door Width	Hinge Height
45 mm (1-3/4 inch)	900 mm (3 feet) and less	113 mm (4-1/2 inches)

- C. Hinge leaves shall be sufficiently wide to allow doors to swing clear of door frame trim and surrounding conditions.
- D. Hinges Required Per Door:

rer 1500 mm (5 ft) high and not over 2280 mm (7 ft 6 in) high 3 bu	ıtts
--	------

- E. Fastenings: Suitable size and type and shall harmonize with hardware as to material and finish. Provide machine screws and lead expansion shields to secure hardware to concrete, or solid masonry. Fiber or rawl plugs and adhesives are not permitted. All fastenings exposed to weather shall be of nonferrous metal.
- F. After locks have been installed; show in presence of COTR that keys operate their respective locks in accordance with keying requirements. (All keys, Master Key level and above shall be sent Registered Mail to the Medical Center Director along with the bitting list. Also a copy of the invoice shall be sent to the COTR for his records.) Installation of locks which do not meet specified keying requirements shall be considered sufficient justification for rejection and replacement of all locks installed on project.

3.3 FINAL INSPECTION

- A. Installer to provide letter to VA COTR that upon completion, installer has visited the Project and has accomplished the following:
 - 1. Re-adjust hardware.
 - 2. Evaluate maintenance procedures and recommend changes or additions, and instruct VA personnel.
 - 3. Identify items that have deteriorated or failed.
 - 4. Submit written report identifying problems.

3.4 DEMONSTRATION

A. Demonstrate efficacy of mechanical hardware and electrical, and electronic hardware systems, including adjustment and maintenance procedures, to satisfaction of COTR and VA Locksmith.

3.5 HARDWARE SETS

A. Following sets of hardware correspond to hardware symbols shown on drawings. Only those hardware sets that are shown on drawings will be required. Disregard hardware sets listed in specifications but not shown on drawings.

ELECTRIC HARDWARE ABBREVIATIONS LEGEND:

ADO = Automatic Door Operator

EMCH = Electro-Mechanical Closer-Holder

MHO = Magnetic Hold-Open (wall- or floor-mounted)

---END---

SECTION 09 06 00 SCHEDULE FOR FINISHES

VAMC: SOUTHERN OREGON REHABILITATION CENTER & CLINICS

Location: 8495 CRATER LAKE HIGHWAY – WHITE CITY, OR

Project no. and Name:

692-09-008LS - INTERIORS, CONNECTING CORRIDORS AND

BUILDING HUBS

Submission 100%

Date: April 6, 2011

SECTION 09 06 00 SCHEDULE FOR FINISHES

PART I – GENERAL

1.1 DESCRIPTION

This section contains a coordinated system in which requirements for materials specified in other sections shown are identified by abbreviated material names and finish codes in the room finish schedule or shown for other locations.

1.2 MANUFACTURERS

Manufacturer's trade names and numbers used herein are only to identify colors, finishes, textures and patterns. Products of other manufacturer's equivalent to colors, finishes, textures and patterns of manufacturers listed that meet requirements of technical specifications will be acceptable upon approval in writing by contracting officer for finish requirements.

1.3 SUBMITALS

Submit in accordance with SECTION 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES-provide quadruplicate samples for color approval of materials and finishes specified in this section.

1.4 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in text by basic designation only.
- B. MASTER PAINTING INSTITUTE: (MPI)
 2001......Architectural Painting Specification Manual

1.5 INDEX AND SPECIFICATION REFERENCE

2.1	PAINT	AND	COATINGS:

	2.1.A Painting	09 91 00
2.2	FLOOR FINISHES:	
	2.2.A Resilient Sheet Flooring	09 65 16
2.3	WALL FINISHES:	
	2.3.A Vinyl/Acrylic Rigid Wall Covering	09 72 00
2.4	FINISH TRIM	
	2.4.A Wood Base Trim	06 20 00
	2.4.B Window Trim	06 20 00
	2.4.C Window Sills	06 20 00
2.5	CEILINGS:	
	2.5.A Acoustical Ceilings	09 51 00
	2.5.B Gypsum Board Soffits	09 29 00
2.6	SPECIALTIES:	10 26 00
	2.6.A Wall and Door Protection	
	1. Handrail/Crash Rail Combination	10 26 00
	2. Crash Rails	10 26 00
	3. Corner Guards	10 26 00

	2.6.B Tackboards	10 11 23
2.7	DOORS AND FRAMES:	
	2.7.A Hollow Metal Doors and Frames	08 11 13
2.8	LIGHT FIXTURES	26 51 00
2.9	MISCELLANEOUS ITEMS:	
	2.9.A Miscellaneous Wood and Metal Requiring Paint	
	1. Fire Extinguisher Cabinets	10 44 13
	2. Supply and Return Grilles	
3.1	FINISH SCHEDULE MISCELLANEOUS ABBREVIA	TIONS
	AND SYMBOLS	
3.2	INTERIOR FINISHES – COLOR GROUP SCHEDULE	ES

PART 2 - PRODUCTS

2.1 PAINT AND COATINGS

A. MPI Gloss and Sheen Standard		Gloss @60	Sheen @85
Gloss Level 1	a traditional matte finish-flat	max 5 units, and	max 10 units
Gloss Level 3	a traditional "egg-shell like" finish	10-25 units, and	10-35 units
Gloss Level 4	a "satin-like" finish	20-35 units, and	min. 35 units
Gloss Level 5	a traditional semi-gloss	35-70 units	
Gloss Level 6	a traditional gloss	70-85 units	

B. Paint Colors

Paint Code	Gloss	Manufacturer	Color Name/No.	General Location
P-1	3	Miller Paints	Kiara 0005	All Corridor Walls above Wainscot System Some Pilaster/Walls/Soffits at Primary and Secondary Intersections at discretion of VA
P-2	3	Miller Paints	Moth Wing 0183	Corridor Pilasters/Soffits
P-3	5	Miller Paints	Macadamia Brown 0184	Some non-passage doors and frames in Corridors (Access to closets, etc.)
P-4	3 on Walls 5 on Door Frames	Rodda Paints	Shady Side 8765	Accent Paint – Color Schemes "A" As shown on Notebook Elevations
P-5	3 on Walls 5 on Door Frames	Rodda Paints	Brookview 8265	Accent Paint – Color Scheme "B" As shown on Notebook Elevations
P-6	3 on Walls 5 on Door Frames	Benjamin Moore	Cushing Green HC-125	Alternate Accent Paint – Color Scheme "B" As shown on Notebook Elevations
P-7	3 on Walls 5 on Door Frames	Rodda Paints	Inky Sea AC-145	Accent Paint – Color Scheme "C" As shown on Notebook Elevations

P-8	3 on Walls 5 on Door Frames	Rodda Paints	Burnished Caramel 8574	Accent Paint – Color Scheme "D"
P-9	1	Rodda Paints	Shady Side 8765	Ceilings on 2 nd Floor Corridors above Suspended Metal Vault System

2.2 FLOOR FINISHES

A. Vinyl Sheet Flooring, Heat-Welded Seams (WSF)

Finish Code	Pattern name	Manufacturer	Mfg. Color Name/No.
WSF-1	Primus Lacosta	Mannington Commercial	ALL 129 Fawn
WSF-2	Primus Lacosta	Mannington Commercial	ALL 131 Suede
WSF-3 Color Scheme "A" (Rust/Brown)	Primus Lacosta	Mannington Commercial	ALL134 Cherry Wood
Color Scheme "B" (Blue/Green)	Primus Lacosta	Mannington Commercial	ALL127 Blue Ridge
Color Scheme "C" (Bright Blue/Black)	Primus Lacosta	Mannington Commercial	ALL123 Royal Blue
Color Scheme "D" (Beige/Rust)	Primus Lacosta	Mannington Commercial	ALL132 Glacier
WSF-4 Color Scheme "A" (Rust/Brown)	Primus Framework	Mannington Commercial	ALL101 Bark
Color Scheme "B" (Blue/Green)	Primus Lacosta	Mannington Commercial	ALL122 Hunter Green

Color Scheme "C" (Bright Blue/Black)	Primus Lacosta	Mannington Commercial	ALL124 Iron
Color Scheme"D" (Beige/Rust)	Primus Lacosta	Mannington Commercial	ALL134 Cherry Wood

B. Welding Rods: See manufacturer's chart for recommended matching welding rods.

2.3 WALL FINISHES

A. Vinyl/Acrylic Rigid Sheet Wall Covering Wainscot, Pilaster Base, and Door Skins (RSW)

Finish Code	Manufacturer	Mfg. Color Name/No.
RSW-1	C/S Group	Acovyn #513 Khaki Brown
RSW-2	C/S Group	Acrovyn #196 Fawn Used as 6" base at corridor pilasters
RSW-3	C/S Group	Acrovyn Chameleon Collection #372 Classic Maple Door Skins

B. Engineered Molding Trim (EM): C/S Group Acrovyn #196 Fawn, 2" X 3/8" X 10' lengths

2.4 FINISH TRIM

- A. Wood Base Trim (WT)
 - 1. Trim at top of Integral Cove Base (ICB): 1X2 clear maple or hardwood, stained to match wood tone of Hand Rail integral Crash Rail. Seal with clear polyurethane finish, Gloss Level 5. See Architectural Drawings for profile and location.
- B. Window Trim 1X4 clear maple or hardwood, stained to match wood tone of Hand Rail integral Crash Rail. Seal with polyurethane finish, gloss Level 5.
- C. Window Sills: Solid Surface (SO-1) InPro Corporation Prism Solid Surface #P9002 White Sand

2.5 CEILINGS

A. Acoustical Ceilings

Finish Code	Component	Color Pattern	Manufacturer	Mfg Name/No.
-	Exposed Suspension System	Prelude XL White	Armstrong (or Equal)	15/16"
AT-1	24 X 48 Lay-in Acoustical Tile	Cirrus Fine Texture Second Look II	Armstrong	15/16" Beveled Tegular Edge #513 Scored to look like 24X24
AT-2	24X48 Lay-in Acoustical Tile	Cirrus Fine Texture Second Look I	Armstrong	15/16"Beveled Tegular Edge #512 Scored to look like 12X12
AT-3	12X12 Glue-up Acoustical Tile	Cirrus Fine Texture	Armstrong	12X12 Beveled Edge #580 (WH)
AT-4	Suspended Metal Vault System	White	Armstrong	Serpentina Vault 72" X 23-1/8" 15 degree arc Ceiling Panels

B. Gypsum Board Soffits: See 3.3 INTERIOR FINISHES for paint colors in individual areas.

2.6 SPECIALTIES

A. Wall and Door Protection

Item	Manufacturer	Style/No./Color	Location
1. Corner Guard CG-1	C/S Group	Acrovyn SSM Series #SSM-20N 2" X 2" X 36", set on top of wood trim on base and field-cut to 36" A.F.F. Color: #196 Fawn	Outside corners of all corridor pilasters when they are painted P-2

CG-2	C/S Group	Acrovyn SSM Series #SSM-20N 2" X 2" X 36", set on top of wood trim on base and field-cut to 36" A.F.F. Color: #253 Parchment	Outside corners of Pilaster/Wall/Soffit areas when they are painted P-1
CG-3	C/S Group	Acrovyn SSM Series #SSM-20N 2" X 2" X 36", set on top of wood trim on base and field-cut to 36" A.F.F. Color: #106 Brown	Outside corners of all building hubs or intersections when they are painted P-4
CG-4	C/S Group	Acrovyn SSM Series #SSM-20N 2" X 2" X 36", set on top of wood trim on base and field-cut to 36" A.F.F. Color: #930 Blue Silk	Outside corners of all building hubs or intersections when they are painted P-5
CG-5	C/S Group	Acrovyn SSM Series #SSM-20N 2" X 2" X 36", set on top of wood trim on base and field-cut to 36" A.F.F. Color: #522 Savanna	Outside corners of all building hubs or intersections when they are painted P-6
CG-6	C/S Group	Acrovyn SSM Series #SSM-20N 2" X 2" X 36", set on top of wood trim on base and field-cut to 36" A.F.F. Color: #129 Yale Blue	Outside corners of all building hubs or intersections when they are painted P-7
CG-7	C/S Group	Acrovyn SSM Series #SSM-20N 2" X 2" X 36", set on top of wood trim on base and field-cut to 36" A.F.F. Color: #307 Sienna	Outside corners of all building hubs or intersections when they are painted P-8
2. Handrail/Crash Rail HR	C/S Group	Acrovyn #P-RSA Round Stainless Steel Handrail w/attached integral Acrovyn crash rail Crash Rail - #372 Classic Maple Woodgrain Pattern	Corridors where indicated on Drawings

3. Crash Rail CR	C/S Group	Acrovyn #SCR-40N 4" surface-mounted Crash Rail - #372 Classic Maple Woodgrain Pattern Suede Texture	Corridors where indicated on Drawings – no hand rail
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B. Tackboards

Location	Material	Manufacturer/Product	Color Name/No.
Corridor Display Niches where shown on Drawings	½" Linoleum Tackboard	RJF International Corporation Wall Talkers Tac-Wall 48" and 72" X 95 lin.'	Schemes "A" and "D" – 2166 Sun Tan Scheme "B" – 2185 Deep Blue or 2203 Peridot Scheme "C" – 2202 Charcoal

2.7 DOORS AND FRAMES

- A. Refinish existing doors to match maple trim or re-skin with RSW-3.
- B. All door frames (existing and new) to paint color of wall where they occur.

2.8 LIGHT FIXTURES

Fixture Type	Manufacturer/No.	Color/Finish
A1 24X24 Recessed	Lithonia Lighting "Avante" 2AV-G-2-17-MDR-SMD-MVOLT- GEB10	Factory Finish
A2 24X48 Recessed	Lithonia Lighting "Avante" 2AV-G-2-32-MDR-SMD-MVOLT- GEB10	Factory Finish
B1 6" Square Down Light	Gotham Architectural Down Lighting SQF- 1/26DTT-6AR- LD- MVOLT	Clear Aperture/Trim Matte

B2 6" Lensed Wallwash	Gotham Architectural Down Lighting DLFW-1/26DTT-LD-MVOLT	Factory Finish
C 9X48 Suspended	Philips Ledalite "Sona"	White with white louver
D Wall Sconce	Kenall MedMaster Auracyl ADA Sconce MAS813-S-OL-CS-1-13QD	Finish: CS Cool Satin Outer Lens: OL Oyster Linen

2.9 MISCELLANEOUS ITEMS:

- A. Miscellaneous Wood and Metal Requiring Paint
 - 1. Fire Extinguisher Cabinets. See Section 10 44 13.
 - 2. Supply and Return Air Grilles

PART III EXECUTION

3.1 MISCELLANEOUS ABBREVIATIONS AND SYMBOLS

A. MISCELLANEOUS ABBREVIATIONS FOR FINISHES			
Term	Abbr.	Term	Abbr.
Acoustical Ceiling	AT	Natural Finish	NF
Anodized Aluminum – Natural Finish	AA	Paint	P
Clear Coating	CC	Plastic Laminate	HPDL
Concrete	С	Rigid Sheet Wall Covering	RSW

Concrete Masonry Unit	CMU	Rubber Base	RB
Corner Guard	CG	Stain	ST
Crash Rail	CR	Vinyl Composition Tile	VCT
Engineered Molding	EM	Vinyl Sheet Flooring	VSF
Gypsum Wallboard	GWB	Vinyl Sheet Flooring – Welded Seams	WSF
Hand Rail	HR	VSF Welding Rods	WR
Integral Cove Base	ICB	Wood	WD
Material	MAT	Wood Trim	WT

B. FINSIH SCHEDULE SYMBOLS

Symbol Definition

- ** Same finish as adjoining walls
- No color required
- E Existing
- XX To match existing
- EFTR Existing finish to remain
- RM Remove

3.2 INTERIOR FINISHES - COLOR GROUP SCHEDULE

General Finishes Notes:

- 1. For all floor finishes locations and patterns, see Sheet A1.1 of Architectural Drawings.
- 2. For typical paint and wall finishes locations, see Project Notebook.
- 3. Verify existence and location of corner guards, crash rails, handrails, and wainscot system on Interior Elevations (A2.1 and A2.2), which take precedence over listings in this schedule.
- 4. Materials and Finishes shown in these Groups are intended as general information, to be used as a guideline only and applied on an individual basis depending upon existing conditions.

GROUP #1 – CONNECTING CORRIDORS

Location	Existing corridors throughout campus
Doors	Refinished to match Crash Rail or Re-skin w/ RSW-3
Door Trim	All door frames paint color of wall where they occur throughout
Non-Passage Doors/Trim	P-3
Flooring	WSF-1/WSF-2 primary floor coverings
	WSF-3/WSR-4 used as desired - See Architectural Sheet A1.1 for typical pattern layouts
Base	ICB with WT where indicated on drawings, RSW-2 as 6" base at Pilaster
Walls	RSW-1(with EM) Wainscot System and HR to 36" A.FF, P-1 above
Pilasters	P-2
Window Trim	Hardwood stained to match HR
Window Sills	SO-1 Solid Surface
Corner Guards	CG-1 where shown on drawing
Ceiling	Soffits – P-2
	AT-1 on all First Floor Corridors
	AT-4 on all 2 nd Floor Corridors – Ceilings above AT-4 to be painted with P-8

GROUP #2 – PRIMARY INTERSECTIONS

Location	Intersections A, B, C, and at Theater per Architectural Sheet A1.1
Doors	Refinished to match Crash Rail (CR) or Re-skin w/RSW-3
Door Trim	All door frames paint color of wall
Non-Passage Doors/Trim	P-3
Flooring	WSF-1/WSF-2 primary floor coverings

	WSF-3/WSR-4 used as desired - See Sheet A1.1 for typical pattern layouts and Project Notebook for selection of color schemes	
Base	ICB with WT where indicated on drawings	
Walls	RSW-1 (with EM) Wainscot System with HR to 36" A.F.F, P-1 above where shown on Elevations, Architectural Sheet A2.1	
	For accent paint at major openings, see Project Notebook	
Window Sills	SO-1 Solid Surface	
Window Trim	Hardwood stained to match HR	
Corner Guards	All exposed outside corners, matched to wall paint – See 2.6.A Wall & Door Protection on pages 7 and 8 of this section.	
Ceiling	Soffits – P-2 on Pilasters at entry to Intersections, P-1 within Intersections at VA's discretion AT-2 or 3 inside intersections – See Architectural Sheet A1.3	

GROUP #3 – SECONDARY INTERSECTIONS AND BUILDING HUBS

Location	Secondary Intersections and Building Hubs throughout	
Doors	Refinished to match Crash Rail or Re-skin w/RSW-3	
Door Trim	All door frames paint color of wall	
Non-Passage Doors/Trim	P-3	
Flooring	WSF-1/WSF-2 primary floor coverings WSF-3/WSR-4 used as desired - See Sheet A1.1 for typical pattern layouts and Project Notebook for selection of Color Schemes	
Base	ICB with WT	
Walls	RSW-1 (with EM) Wainscot System with HR or CR to 36" A.F.F, P-1 above where shown on Elevations, Architectural Sheet A2.2 For accent paint at major openings, see Project Notebook	

Corner Guards	All exposed outside corners, matched to wall paint – See 2.6.A Wall & Door Protection on page and 8 of this section.	
Ceiling	Soffits – P-2 on Pilasters at entry to Intersections, P-1 within Intersections AT-2 or 3 inside intersections – See Architectural Sheet A1.4	

---E N D ---

SECTION 09 29 00 **GYPSUM BOARD**

PART 1 – GENERAL

1.1 DESCRIPTION

This section specifies installation and finishing of gypsum board.

1.2 RELATED WORK

- A. Paint, caulking and finish Section 09 91 00
- B. Lay in gypsum board ceiling panels: Section 09 51 00, ACOUSTICAL CEILING.

1.3 TERMINOLOGY

- A. Definitions and description of terms shall be in accordance with ASTM C11, C840, and as specified.
- B. "Yoked": Gypsum board cut out for opening with no joint at the opening (along door jamb or above the door).

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:
 - 1. Cornerbead and edge trim.
 - 2. Finishing materials.
 - 3. Laminating adhesive.
 - 4. Gypsum board, each type.

C. Shop Drawings:

- 1. Typical gypsum board installation, showing corner details, edge trim details and the like.
- 2. Typical sound rated assembly, showing treatment at perimeter of partitions and penetrations at gypsum board.
- 3. Typical fire rated assembly and column fireproofing, indicating details of construction same as that used in fire rating test.

D. Samples:

- 1. Cornerbead.
- 2. Edge trim.
- 3. Control joints.
- E. Test Results:
 - 1. Fire rating test, each fire rating required for each assembly.
 - 2. Sound rating test.

1.5 DELIVERY, IDENTIFICATION, HANDLING AND STORAGE

In accordance with the requirements of ASTM C840.

1.6 ENVIRONMENTAL CONDITIONS

In accordance with the requirements of ASTM C840.

1.7 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

В.	American S	Society for	Testing And Materials (ASTM):
	C11 00		T ' 1 D 1 ' '

C11-08	Terminology Relating to Gypsum and Related Building
	Materials and Systems
C475-02	Joint Compound and Joint Tape for Finishing Gypsum Board
	Application and Finishing of Gypsum Board
C919-08	Sealants in Acoustical Applications
C954-07	Steel Drill Screws for the Application of Gypsum Board or
	Metal Plaster Bases to Steel Stud from 0.033 in. (0.84mm) to
	0.112 in. (2.84mm) in thickness
C1002-07	Steel Self-Piercing Tapping Screws for the Application of
	Gypsum Panel Products or Metal Plaster Bases to Wood Studs
	or Steel Studs
C1047-05	Accessories for Gypsum Wallboard and Gypsum Veneer Base
C1177-06	Glass Mat Gypsum Substrate for Use as Sheathing
C1658-06	Glass Mat Gypsum Panels
C1396-06	7 ±
E84-08	Surface Burning Characteristics of Building Materials
Underwriters Laboratories	Inc. (UL):
Latest Edition	Fire Resistance Directory
Inchcape Testing Services	(ITS):
Latest Editions	Certification Listings

PART 2 - PRODUCTS

C.

D.

2.1 GYPSUM BOARD

- A. Gypsum Board: ASTM C1396, Type X, 16 mm (5/8 inch) thick unless shown otherwise. Shall contain a minimum of 20 percent recycled gypsum.
- B. Water Resistant Gypsum Backing Board: ASTM C620, Type X, 16 mm (5/8 inch) thick.
- D. Gypsum cores shall contain a minimum of 95 percent post industrial recycled gypsum content. Paper facings shall contain 100 percent post-consumer recycled paper content.

2.2 GYPSUM SHEATHING BOARD

- A. ASTM C1396, Type X, water-resistant core, 16 mm (5/8 inch) thick.
- B. ASTM C1177, Type X.

2.3 ACCESSORIES

- A. ASTM C1047, except form of 0.39 mm (0.015 inch) thick zinc coated steel sheet or rigid PVC plastic.
- B. Flanges not less than 22 mm (7/8 inch) wide with punchouts or deformations as required to provide compound bond.

2.4 FASTENERS

A. ASTM C1002 and ASTM C840, except as otherwise specified.

- B. Select screws of size and type recommended by the manufacturer of the material being fastened.
- C. For fire rated construction, type and size same as used in fire rating test.
- D. Clips: Zinc-coated (galvanized) steel; gypsum board manufacturer's standard items.

2.5 FINISHING MATERIALS AND LAMINATING ADHESIVE

ASTM C475 and ASTM C840. Free of antifreeze, vinyl adhesives, preservatives, biocides and other VOC. Adhesive shall contain a maximum VOC content of 50 g/l.

PART 3 - EXECUTION

3.1 GYPSUM BOARD HEIGHTS

- A. Extend all layers of gypsum board from floor to underside of structure overhead on following partitions and furring:
 - 1. Two sides of partitions:
 - a. Fire rated partitions.
 - b. Smoke partitions.
 - c. Sound rated partitions.
 - d. Full height partitions shown (FHP).
 - e. Corridor partitions.
 - 2. One side of partitions or furring:
 - a. Inside of exterior wall furring or stud construction.
 - b. Room side of room without suspended ceilings.
 - c. Furring for pipes and duct shafts, except where fire rated shaft wall construction is shown.
 - 3. Extend all layers of gypsum board construction used for fireproofing of columns from floor to underside of structure overhead, unless shown otherwise.
- B. In locations other than those specified, extend gypsum board from floor to heights as follows:
 - 1. Not less than 100 mm (4 inches) above suspended acoustical ceilings.
 - 2. At ceiling of suspended gypsum board ceilings.
 - 3. At existing ceilings.

3.2 INSTALLING GYPSUM BOARD

- A. Coordinate installation of gypsum board with other trades and related work.
- B. Install gypsum board in accordance with ASTM C840, except as otherwise specified.
- C. Moisture and Mold–Resistant Assemblies: Provide and install moisture and mold-resistant glass mat gypsum wallboard products with moisture-resistant surfaces complying with ASTM C1658 where shown and in locations which might be subject to moisture exposure during construction.
- D. Use gypsum boards in maximum practical lengths to minimize number of end joints.
- E. Bring gypsum board into contact, but do not force into place.
- F. Ceilings:
 - 1. For single-ply construction, use perpendicular application.
 - 2. For two-ply assembles:
 - a. Use perpendicular application.

b. Apply face ply of gypsum board so that joints of face ply do not occur at joints of base ply with joints over framing members.

G. Walls (Except Shaft Walls):

- 1. When gypsum board is installed parallel to framing members, space fasteners 300 mm (12 inches) on center in field of the board, and 200 mm (8 inches) on center along edges.
- 2. When gypsum board is installed perpendicular to framing members, space fasteners 300 mm (12 inches) on center in field and along edges.
- 3. Stagger screws on abutting edges or ends.
- 4. For single-ply construction, apply gypsum board with long dimension either parallel or perpendicular to framing members as required to minimize number of joints except gypsum board shall be applied vertically over "Z" furring channels.
- 5. No offset in exposed face of walls and partitions will be permitted because of single-ply and two-ply or three-ply application requirements.

H. Acoustical or Sound Rated Partitions, Fire and Smoke Partitions:

- 1. Cut gypsum board for a space approximately 3 mm to 6 mm (1/8 to 1/4 inch) wide around partition perimeter.
- 2. Coordinate for application of caulking or sealants to space prior to taping and finishing.
- 3. For sound rated partitions, use sealing compound (ASTM C919) to fill the annular spaces between all receptacle boxes and the partition finish material through which the boxes protrude to seal all holes and/or openings on the back and sides of the boxes. STC minimum values as shown.

I. Electrical and Telecommunications Boxes:

1. Seal annular spaces between electrical and telecommunications receptacle boxes and gypsum board partitions.

J. Accessories:

- 1. Set accessories plumb, level and true to line, neatly mitered at corners and intersections, and securely attach to supporting surfaces as specified.
- 2. Install in one piece, without the limits of the longest commercially available lengths.
- 3. Corner Beads:
 - a. Install at all vertical and horizontal external corners and where shown.
 - b. Use screws only. Do not use crimping tool.

3.3 INSTALLING GYPSUM SHEATHING

- A. Install in accordance with ASTM C840, except as otherwise specified or shown.
- B. Use screws of sufficient length to secure sheathing to framing.
- C. Space screws 9 mm (3/8 inch) from ends and edges of sheathing and 200 mm (8 inches) on center. Space screws a maximum of 200 mm (8 inches) on center on intermediate framing members.
- D. Apply 600 mm by 2400 mm (2 foot by 8 foot) sheathing boards horizontally with tongue edge up.
- E. Apply 1200 mm by 2400 mm or 2700 mm (4 ft. by 8 ft. or 9 foot) gypsum sheathing boards vertically with edges over framing.

3.4 CAVITY SHAFT WALL: NOT USED

3.5 FINISHING OF GYPSUM BOARD

- A. Finish joints, edges, corners, and fastener heads in accordance with ASTM C840. Use Level 5 finish for al finished areas open to public view.
- B. Before proceeding with installation of finishing materials, assure the following:
 - 1. Gypsum board is fastened and held close to framing or furring.
 - 2. Fastening heads in gypsum board are slightly below surface in dimple formed by driving tool.
- C. Finish joints, fasteners, and all openings, including openings around penetrations, on that part of the gypsum board extending above suspended ceilings to seal surface of non decorated gypsum board construction. After the installation of hanger rods, hanger wires, supports, equipment, conduits, piping and similar work, seal remaining openings and maintain the integrity of the construction Sanding is not required of non decorated surfaces.

3.6 REPAIRS

- A. After taping and finishing has been completed, and before decoration, repair all damaged and defective work, including nondecorated surfaces.
- B. Patch holes or openings 13 mm (1/2 inch) or less in diameter, or equivalent size, with a setting type finishing compound or patching plaster.
- C. Repair holes or openings over 13 mm (1/2 inch) diameter, or equivalent size, with 16 mm (5/8 inch) thick gypsum board secured in such a manner as to provide solid substrate equivalent to undamaged surface.
- D. Tape and refinish scratched, abraded or damaged finish surfaces including cracks and joints in non decorated surface and STC equivalent to the sound rated construction.

3.7 UNACCESSIBLE CEILINGS: NOT USED

---END---

SECTION 09 51 00 ACOUSTICAL CEILINGS

PART 1- GENERAL

1.1 DESCRIPTION

- A. Acoustical units.
- B. Adhesive application.
- C. Suspension System.
- D. Suspended Metal Vault System (2nd Floor corridors).

1.2 RELATED WORK

A. Color, pattern, and location of each type of acoustical unit: Section 09 06 00. SCHEDULE FOR FINISHES.

1.3 SUBMITTAL

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples:
 - 1. Acoustical units, each type, with label indicating conformance to specification requirements, including units specified to match existing.
 - 2. Colored markers for units providing access.
- C. Manufacturer's Literature and Data:
 - 1. Ceiling suspension system, each type, showing complete details of installation, including suspension system specified to match existing and upward access system details for concealed grid systems.
 - 2. Acoustical units, each type
 - 3. Runners designed for snap-in attachment of metal pans.
- D. Manufacturer's Certificates: Acoustical units, each type, in accordance with specification requirements.
- E. Shop drawings of panel layouts for Suspended Metal Vault System. Show locations of items which are to be coordinated with, or supported by the ceilings.

1.4 DEFINITIONS

- A. Standard definitions as defined in ASTM C634.
- B. Terminology as defined in ASTM E1264.

1.5 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in the text by basic designation only.
- B. American Society for Testing and Materials (ASTM):

A641/A641M-03	Zinc-coated (Galvanized) Carbon Steel Wire
A653/A653M-07	Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-
	coated (Galvannealed) by the Hot-Dip Process
A 1008	Standard Specification for Steel Sheet Cold-Rolled

Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability

C423-07	Sound Absorption and Sound Absorption Coefficients by
	the Reverberation Room Method
C634-02 (E2007)	Standard Terminology Relating to Environmental
,	Acoustics
C635-04	Metal Suspension Systems for Acoustical Tile and Lay-in
	Panel Ceilings
C636-06	Installation of Metal Ceiling Suspension Systems for
	Acoustical Tile and Lay-in Panels
E84-07	Surface Burning Characteristics of Building Materials
E119-07	Fire Tests of Building Construction and Materials
E413-04	Classification for Rating Sound Insulation.
E580-06	Application of Ceiling Suspension Systems for Acoustical
	Tile and Lay-in Panels in Areas Requiring Seismic
	Restraint
E1264-(R2005)	Classification for Acoustical Ceiling Products
E11477	Standard Test Method for Luminous Reflectance Factor of
	Acoustical Materials by Use of Integrating-Sphere
	Reflectometers.

PART 2- PRODUCTS

2.1 METAL SUSPENSION SYSTEM

- A. ASTM C635, heavy-duty system, except as otherwise specified.
 - 1. Ceiling suspension system members may be fabricated from either of the following, unless specified otherwise.
 - a. Galvanized cold-rolled steel, bonderized.
 - b. Extruded aluminum.
 - c. Fire resistant plastic (glass fiber) having a flame spread and smoke developed rating of not more than 25 when tested in accordance with ASTM E84.
 - 2. Use same construction for cross runners as main runners. Use of lighter-duty sections for cross runners is not acceptable.
- B. Exposed grid suspension system for support of lay-in panels:
 - 1. Exposed grid width not less than 22 mm (7/8 inch) with not less than 8 mm (5/16 inch) panel bearing surface.
 - 2. Fabricate wall molding and other special molding from the same material with same exposed width and finish as the exposed grid members.
 - 3. On exposed metal surfaces apply baked-on enamel flat texture finish in color to match adjacent acoustical units unless specified otherwise in Section 09 06 00, SCHEDULE FOR FINISHES.
 - 4. Installation of grid system may require compliance with Northwest Wall & Ceiling Bureau Technical Bulletin 401 Oregon (NWCB TB 401OR). Coordinate with COTR.
- C. Concealed grid suspension system for support of mineral base acoustical tile:
 - 1. Concealed grid upward access suspension system to provide an initial opening of 300 mm by 600 mm (12 by 24 inches) and for removal of adjacent runners and tile

- without the use of special tools, and without damage to suspension system and acoustical tile.
- 2. Minimum flange width of 22 mm (7/8 inch) except for access hook and angle.
- 3. Minimum flange width of 11 mm (7/16 inch) for access hook and angle.

2.2 PERIMETER SEAL

- A. Vinyl, polyethylene or polyurethane open cell sponge material having density of 1.3 plus or minus 10 percent, compression set less than 10 percent with pressure sensitive adhesive coating on one side.
- B. Thickness as required to fill voids between back of wall molding and finish wall.
- C. Not less than 9 mm (3/8 inch) wide strip.

2.3 WIRE

- A. ASTM A641.
- B. For wire hangers: Minimum diameter 2.68 mm (0.1055 inch).
- C. For bracing wires: Minimum diameter 3.43 mm (0.1350 inch).

2.4 ANCHORS AND INSERTS

- A. Use anchors or inserts to support twice the loads imposed by hangers attached thereto.
- B. Hanger Inserts:
 - 1. Fabricate inserts from steel, zinc-coated (galvanized after fabrication).
 - 2. Nailing type option for wood forms:
 - a. Upper portion designed for anchorage in concrete and positioning lower portion below surface of concrete approximately 25 mm (one inch).
 - b. Lower portion provided with not less than 8 mm (5/16 inch) hole to permit attachment of hangers.
 - 3. Flush ceiling insert type:
 - a. Designed to provide a shell covered opening over a wire loop to permit attachment of hangers and keep concrete out of insert recess.
 - b. Insert opening inside shell approximately 16 mm (5/8 inch) wide by 9 mm (3/8 inch) high over top of wire.
 - c. Wire 5 mm (3/16 inch) diameter with length to provide positive hooked anchorage in concrete.

C. Clips:

- 1. Galvanized steel.
- 2. Designed to clamp to steel beam or bar joists, or secure framing member together.
- 3. Designed to rigidly secure framing members together.
- 4. Designed to sustain twice the loads imposed by hangers or items supported.
- D. Tile Splines: ASTM C635.

2.5 ADHESIVE

- A. ASTM D1779, having flame spread index of 25 or less when tested in accordance with ASTM E84.
- B. Developing minimum strength of 7 kg/m² (one psi) of contact surface 48 hours after installation in temperature of 21 °C (70 °F).

2.6 ACOUSTICAL UNITS

A. General:

- 1. Ceiling Tile shall meet minimum 37% bio-based content in accordance with USDA Bio-Preferred Product requirements.
- 2. ASTM E1264, weighing 3.6 kg/m² (3/4 psf) minimum for mineral fiber panels or tile.
- 3. Class A Flame Spread: ASTM 84
- 4. Minimum NRC (Noise Reduction Coefficient): 0.55 unless specified otherwise: ASTM C423.
- 5. Minimum CAC (Ceiling Attenuation Class): 40-44 range unless specified otherwise: ASTM E413.
- 6. Manufacturers standard finish, minimum Light Reflectance (LR) coefficient of 0.75 on the exposed surfaces, except as specified otherwise in Section 09 06 00, SCHEDULE FOR FINISHES.
- 7. Lay-in panels: Sizes as shown, with beveled tegular edges.
- 8. Adhesive applied tile: 300 by 300 mm (12 by 12 inch) size, having beveled edges.
- B. Type III Units Mineral base with water-based painted finish less than 10 g/l VOC, Form
- 2 Water felted, minimum 16 mm (5/8 inch) thick. Mineral base to contain minimum 65 percent recycled content.

2.7 SUSPENDED METAL VAULT SYSTEM

A. General:

- 1. Panels: 72" X 23-1/8", white, smooth metal panels with 15 degree arc, and hemmed and upturned edges.
- 2. Suspension System: Main beams fabricated from painted commercial quality extruded aluminum and cross tees, base metal and end detail, fabricated from painted commercial quality hot dipped galvanized steel complying with ASTM A653.
 - a. Main beams and cross tees: 15/16" type exposed flange design.
 - b. Exposed surfaces chemically cleansed, capping pre-finished galvanized steel in baked polyester paint.
 - c. Grid color: match to color of selected tile.
- 3. All components and accessories as required for completion of system per manufacturer's instructions.
- 4. Provide panels, accessories, and suspension system from a single manufacturer.

2.8 ACCESS IDENTIFICATION

A. Markers:

- 1. Use colored markers with pressure sensitive adhesive on one side.
- 2. Make colored markers of paper of plastic, 6 to 9 mm (1/4 to 3/8 inch) in diameter.
- B. Use markers of the same diameter throughout building.
- C. Color Code: Use following color markers for service identification and coordinate with VA's COTR:

Color	Service
Red	Sprinkler System: Valves and Controls
Green	Domestic Water: Valves and Controls
Yellow	Chilled Water and Heating Water
Orange	Ductwork: Fire Dampers
Blue	Ductwork: Dampers and Controls
Black	Gas: Laboratory, Medical, Air and Vacuum

PART 3 EXECUTION

3.1 CEILING TREATMENT

- A. Treatment of ceilings shall include sides and soffits of ceiling beams, furred work 600 mm (24 inches) wide and over, and vertical surfaces at changes in ceiling heights unless otherwise shown. Install acoustic tiles after wet finishes have been installed and solvents have cured.
- B. Lay out acoustical units symmetrically about center lines of each room or space unless shown otherwise on reflected ceiling plan.
- C. Metal Vault System: Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Use only full width units and coordinate panel layout with mechanical and electrical fixtures.

D. Moldings:

- 1. Install metal wall molding at perimeter of room, column, or edge at vertical surfaces.
- 2. Install special shaped molding at changes in ceiling heights and at other breaks in ceiling construction to support acoustical units and to conceal their edges.

E. Perimeter Seal:

- 1. Install perimeter seal between vertical leg of wall molding and finish wall, partition, and other vertical surfaces.
- 2. Install perimeter seal to finish flush with exposed faces of horizontal legs of wall molding.

F. Existing ceiling:

- 1. Where extension of existing ceilings occur, match existing.
- 2. Where acoustical units are salvaged and reinstalled or joined, use salvaged units within a space. Do not mix new and salvaged units within a space which results in contrast between old and new acoustic units.
- 3. Comply with specifications for new acoustical units for new units required to match appearance of existing units.

3.2 CEILING SUSPENSION SYSTEM INSTALLATION

A. General:

- 1. Install metal suspension system for acoustical tile and lay-in panels in accordance with ASTM C636, except as specified otherwise.
- 2. Use direct or indirect hung suspension system or combination thereof as defined in ASTM C635.
- 3. Support a maximum area of 1.48 m² (16 sf) of ceiling per hanger.
- 4. Prevent deflection in excess of 1/360 of span of cross runner and main runner.
- 5. Provide extra hangers, minimum of one hanger at each corner of each item of mechanical, electrical and miscellaneous equipment supported by ceiling suspension system not having separate support or hangers.
- 6. Provide not less than 100 mm (4 inch) clearance from the exposed face of the acoustical units to the underside of ducts, pipe, conduit, secondary suspension channels, concrete beams or joists; and steel beam or bar joist unless furred system is shown,
- 7. Use main runners not less than 1200 mm (48 inches) in length.

- 8. Install hanger wires vertically. Angled wires are not acceptable except for seismic restraint bracing wires.
- 9. Where existing grid system is retained, confirm that it will coordinate with the sizes and types of new acoustical time units. Clean up and repaint existing grid with flat paint that matches to new acoustical tile units.
- 10. Obtain review and approval of COTR prior to closing.

B. Anchorage to Structure:

1. Concrete:

- a. Install hanger inserts and wire loops required for support of hanger and bracing wire in concrete forms before concrete is placed. Install hanger wires with looped ends through steel deck if steel deck does not have attachment device.
- b. Use eye pins or threaded studs with screw-on eyes in existing or already placed concrete structures to support hanger and bracing wire. Install in sides of concrete beams or joists at mid height.

2. Steel:

- a. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels for attachment of hanger wires.
 - (1) Size and space carrying channels to insure that the maximum deflection specified will not be exceeded.
 - (2) Attach hangers to steel carrying channels, spaced four feet on center, unless area supported or deflection exceeds the amount specified.
- b. Attach carrying channels to the bottom flange of steel beams spaced not 1200 mm (4 feet) on center before fire proofing is installed. Weld or use steel clips to attach to beam to develop full strength of carrying channel.
- c. Attach hangers to bottom chord of bar joists or to carrying channels installed between the bar joists when hanger spacing prevents anchorage to joist. Rest carrying channels on top of the bottom chord of the bar joists, and securely wire tie or clip to joist.

B. Direct Hung Suspension System:

- 1. As illustrated in ASTM C635.
- 2. Support main runners by hanger wires attached directly to the structure overhead.
- 3. Maximum spacing of hangers, 1200 mm (4 feet) on centers unless interference occurs by mechanical systems. Use indirect hung suspension system where not possible to maintain hanger spacing.

C. Indirect Hung Suspension System:

- 1. As illustrated in ASTM C635.
- 2. Space carrying channels for indirect hung suspension system not more than 1200 mm (4 feet) on center. Space hangers for carrying channels not more than 2400 mm (8 feet) on center or for carrying channels less than 1200 mm (4 feet) or center so as to insure that specified requirements are not exceeded.
- 3. Support main runners by specially designed clips attached to carrying channels.

3.3 ACOUSTICAL UNIT INSTALLATION

- A. Cut acoustic units for perimeter borders and penetrations to fit tight against penetration for joint not concealed by molding.
 - 1. Paint any edges where trimming the tiles has exposed the interior material of the tile.

- 2. When painting tile edges, do not overlap paint on the face of the tile or the grid.
- B. Install lay-in acoustic panels in exposed grid with not less than 6 mm (1/4 inch) bearing at edges on supports.
 - 1. Install tile to lay level and in full contact with exposed grid.
 - 2. Replace cracked, broken, stained, dirty, or tile not cut for minimum bearing.
- C. Adhesive applied tile:
 - 1. Condition of surface shall be in accordance with ASTM D1779, Note 1, Cleanliness of Surface, and Note 4, Rigidity of Base Surface.
 - 2. Size or seal surface as recommended by manufacturer of adhesive and allow to dry before installing units.

D. Markers:

- 1. Install markers of color code specified to identify the various concealed piping, mechanical, and plumbing systems.
- 2. Attach colored markers to exposed grid on opposite sides of the units providing access.
- 3. Attach marker on exposed ceiling surface of upward access acoustical unit.

3.4 SUSPENDED METAL VAULT SYSTEM

- A. Install suspension system and panels in accordance with manufacturer's installation instructions and in compliance with ASTM C636 and with authorities having jurisdiction, including accordance with Northwest Wall & Ceiling Bureau Technical Bulletin 401 Oregon (NWCB TB 4010R).
- B. Suspend main beam from overhead construction with hanger wires spaced 4'-0" on center along the length of the main runner. Install hanger wires plumb and straight. Hanger wires shall not be installed in convenience holes.
- C. Install wall moldings at intersection of suspended ceiling and vertical surfaces. Miter Corners where wall moldings intersect or install corner caps.
- D. Install acoustical panels in coordination with suspended system, with edges resting on flanges of main runner and cross tees. Cut and fit panels neatly against abutting surfaces. Support edges by wall moldings where required.

3.5 CLEAN-UP AND COMPLETION

- A. Replace damaged, discolored, dirty, cracked and broken acoustical units or panels.
- B. Leave finished work free from defects.

--- E N D ---

SECTION 09 65 16 RESILIENT SHEET FLOORING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section specifies the installation of sheet flooring with backing and integral cove base.
- B. Grades of resilient sheet vinyl floor covering without backing having vinyl plastic wearlayer with backing.
- C. Installation of sheet flooring including following:
 - 1. Heat welded seams.
 - 2. Integral cove base: Installed at intersection of floor and vertical surfaces.

1.2 RELATED WORK

- A. Color, pattern and texture: Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Wood base trim: SECTION 06 20 00, FINISH CARPENTRY.

1.3 QUALITY CONTROL-QUALIFICATIONS:

- A. The Contracting Officer shall approve products or service of proposed manufacturer, suppliers, and installers, and the Contractor shall submit certification that:
 - 1. Heat welded seaming is manufacturer's prescribed method of installation.
 - 2. Installer is approved by manufacturer of materials and has technical qualifications, experience, trained personnel, and facilities to install specified items.
 - 3. Manufacturer's product submitted has been in satisfactory operation, on three installations similar and equivalent in size to this project for three years. Submit list of installations.
- B. The sheet vinyl floor coverings shall meet fire performance characteristics as determined by testing products, per ASTM test method, indicated below by Underwriters Laboratories, Inc. (UL) or another recognized testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Critical Radiant Flux: 0.45 watts per sq. cm or more, Class I, per ASTM E648.
 - 2. Smoke Density: Less than 450 per ASTM E662.
- C. The floor covering manufacturer shall certify that products supplied for installation comply with local regulations controlling use of volatile organic compounds (VOC's).

1.4 SUBMITTALS

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES, submit following:
- B. Manufacturer's Literature and Data:
 - 1. Description of resilient material and accessories to be provided.
 - 2. Resilient material manufacturer's recommendations for adhesives, weld rods, sealants, and underlayment.
 - 3. Application and installation instructions.
- C. Samples:

- 1. Sheet material, 38 mm by 300 mm (1-1/2 inch by 12 inch), of each color and pattern with a welded seam using proposed welding rod // 300 mm (12 inches) square for each type, pattern and color//.
- 2. Cap strip and fillet strip, 300 mm (12 inches) for integral base.
- 3. Shop Drawings and Certificates: Layout of joints showing patterns where joints are expressed, and type and location of obscure type joints. Indicate orientation of directional patterns.
- 4. Certificates: Quality Control Certificate Submittals and lists specified in paragraph, QUALIFICATIONS.
- 5. Edge strips: 150 mm (6 inches) long each type.
- 6. Adhesive, underlayment and primer: Pint container, each type.

1.5 PROJECT CONDITIONS

- A. Maintain temperature of floor materials and room, where work occurs, above $18 \,^{\circ}$ C (65 $^{\circ}$ F) and below $38 \,^{\circ}$ C ($100 \,^{\circ}$ F) for 48 hours before, during and for 48 hours after installation. After above period, room temperature shall not fall below $13 \,^{\circ}$ C ($55 \,^{\circ}$ F).
- B. Construction in or near areas to receive flooring work shall be complete, dry and cured. Do not install resilient flooring over slabs until they have been cured and are sufficiently dry to achieve a bond with adhesive. Follow flooring manufacturer's recommendations for bond and moisture testing.
- C. Building shall be permanently enclosed. Schedule construction so that floor receives no construction traffic when completed.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in original sealed packages or containers; labeled for identification with manufacturer's name and brand.
- B. Deliver sheet flooring full width roll, completely enclosed in factory wrap, clearly marked with the manufacturer's number, type and color, production run number and manufacture date
- C. Store materials in weathertight and dry storage facility. Protect from damage due to handling, weather, and construction operations before, during and after installation. Store sheet flooring on end with ambient temperatures maintained as recommended by manufacturer.
- D. Store sheet flooring on end.
- E. Move sheet vinyl floor coverings and installation accessories into spaces where they will be installed at least 48 hours in advance of installation.

1.7 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.
- B. American Society For Testing Materials (ASTM):

E648-09	Critical Radiant Flux of Floor-Covering Systems Using a
	Radiant Energy Source.

E662-09.....Specific Optical Density of Smoke Generated by Solid Materials.

F1303-04.....Sheet Vinyl Floor Covering with Backing.

F1869-04	Moisture Vapor Emission Rate of Concrete Subfloor using
	Anhydrous Calcium Chloride
F2170-09	Determining Relative Humidity in Concrete Floor Slabs
	using In-situ Probes

C. Resilient Floor Covering Institute (RFCI):

Recommended Work Practices for Removal of Resilient Floor Coverings.

1.8 SCHEDULING

Interior finish work such as plastering, drywall finishing, concrete, terrazzo, ceiling work, and painting work shall be complete and dry before installation. Mechanical, electrical, and other work above ceiling line shall be completed. Heating, ventilating, and air conditioning systems shall be installed and operating in order to maintain temperature and humidity requirements.

1.9 WARRANTY:

Submit written warranty, in accordance with FAR clause 52.246-21, Warranty of Construction requirements except that warranty period shall be extended to include two (2) years.

PART 2 - PRODUCTS

2.1 SHEET VINYL FLOOR COVERINGS

- A. Heterogeneous Sheet Vinyl Floor Coverings: Smooth face, minimum wearlayer thickness .51 mm (.020 inch) and overall thickness of 2 mm
- (0.08 inch). Sheet flooring shall conform to ASTM F1913 and material requirements specified in ASTM F1303, Type II, Grade 1, backing classification not applicable. Foam backed sheet flooring is not acceptable.
- B. Size: Provide maximum size sheet vinyl material produced by manufacturer to provide minimum number of joints. Minimum size width acceptable 1200 mm (48 inches).
- C. Critical Radiant Flux: 0.45 watts per sq.cm or more, Class I, per ASTM E648.
- D. Smoke density: less than 450 per ASTM E662.
- E. Color and pattern of sheet flooring of the same production run.

2.2 WELDING ROD:

Product of floor covering manufacturer in color shall match field color of sheet vinyl covering.

2.3 ADHESIVES

Water resistant type recommended by the sheet flooring manufacturer for the conditions of use. VOC not to exceed 50 g/L

2.4 BASE CAP STRIP AND COVE STRIP

- A. Extruded aluminum compatible with the sheet flooring.
- B. Cap strip "J" shape with feathered edge flange approximately 25 mm (one inch) wide; top designed to receive sheet flooring with 13 mm (1/2 inch) flange lapping top of flooring
- C. Cove strip 70 mm (2-3/4 inch) radius.

2.5 LEVELING COMPOUND (FOR CONCRETE FLOORS)

Provide cementitious products with latex or polyvinyl acetate resins in the mix.

2.6 SEALANT

- A. As specified in Section 07 92 00, JOINT SEALANTS.
- B. Compatible with sheet flooring.

PART 3 - EXECUTION

3.1 PROJECT CONDITIONS

- A. Maintain temperature of sheet flooring above 36 °C (65 °F), for 48 hours before installation.
- B. Maintain temperature of rooms where sheet flooring work occurs above 36 °C (65 °F), for 48 hours, before installation and during installation.
- C. After installation, maintain temperature at or above 36 °C (65 °F.)
- D. Building is permanently enclosed.
- E. Wet construction in or near areas to receive sheet flooring is complete, dry and cured.

3.2 SUBFLOOR PREPARATION

- A. Broom or vacuum clean substrates to be covered by sheet vinyl floor coverings immediately before installation. Following cleaning, examine substrates to determine if there is visually any evidence of moisture, alkaline salts, carbonation, or dust.
- B. Primer: If recommended by flooring manufacturer, prior to application of adhesive, apply concrete slab primer in accordance with manufacturer's directions.
- C. Correct conditions which will impair proper installation, including trowel marks, pits, dents, protrusions, cracks or joints.
- D. Fill cracks, joints, depressions, and other irregularities in concrete or underlayment with leveling compound.
 - 1. Do not use adhesive for filling or leveling purposes.
 - 2. Do not use leveling compound to correct imperfections which can be corrected by spot grinding.
 - 3. Do not fill cracked underlayment. Where cracking is present in existing floor covering review with COTR for underlying problem and repair or replace subflooring to eliminate possibility of similar condition reoccurring in new floor finish.
 - 4. Trowel to smooth surface free of trowel marks, pits, dents, protrusions, cracks or joint lines.
- E. Clean floor of oil, paint, dust and deleterious substances. Leave floor dry and cured free of residue from existing curing or cleaning agents.
- F. Replace damaged or cracked underlayment.
- G. Preparation shall include the removal of existing resilient floor and existing adhesive. Do not use solvents to remove adhesives. Coordinate with Asbestos Abatement Section if asbestos abatement procedures will be involved.
- H. Remove existing resilient flooring and adhesive completely in accordance with Resilient Floor Covering Institute recommendations in manual RFCI-WP. Solvents shall not be used.

3.3 INSTALLATION OF FLOORING

A. Install work in strict compliance with manufacturer's instructions and approved layout drawings. Work shall not proceed until installer submits, and receives approval of, diagrams of proposed seam locations.

- B. Maintain uniformity of sheet vinyl floor covering direction and avoid cross seams.
- C. Arrange for a minimum number of seams and place them in inconspicuous and low traffic areas, but in no case less than 150 mm (6 inches) away from parallel joints in flooring substrates.
- D. Match edges of resilient floor coverings for color shading and pattern at seams.
- E. Where resilient sheet flooring abuts other flooring material floors shall finish level.
- F. Extend sheet vinyl floor coverings into toe spaces, door reveals, closets, and similar openings.
- G. Inform the Resident Engineer of conflicts between this section and the manufacturer's instructions or recommendations for auxiliary materials, or installation methods, before proceeding.
- H. Install sheet in full coverage adhesives.
 - 1. Air pockets or loose edges will not be accepted.
 - 2. Trim sheet materials to touch in the length of intersection at pipes and vertical projections; seal joints at pipe with waterproof cement or sealant.
- I. Keep joints to a minimum; avoid small filler pieces or strips.
- J. Follow manufacturer's recommendations for seams at butt joints. Do not leave any open joints that would be readily visible from a standing position.
- K. Follow manufacturer's recommendations regarding pattern match, if applicable.
- L. Installation of Edge Strips:
 - 1. Locate edge strips under center lines of doors unless otherwise indicated.
 - 2. Set aluminum strips in adhesive, anchor with lead anchors and stainless steel Phillips screws
- M. Integral Cove Base Installation:
 - 1. Set preformed fillet strip at junction of floor to wall to receive base.
 - 2. Install the base with adhesive, terminate expose edge with the cap strip.
 - 3. Form internal and external corners to the geometric shape generated by the cove at either straight or radius corners.
 - 4. Solvent weld joints as specified for the flooring. Seal cap strip to wall with an adhesive type sealant.
 - 5. Unless otherwise specified or shown where sheet flooring is scheduled, provide integral base at intersection of floor and vertical surfaces. Provide sheet flooring and base scheduled for room on floors and walls under and behind areas where casework, laboratory and pharmacy furniture and other equipment occurs, except where mounted in wall recesses.

3.4 INSTALLATION OF INTEGRAL COVED BASE

- A. Set preformed cove to receive base. Install base material with adhesive and terminate exposed edge with aluminum cap strip. Integral base shall be 150 mm (6 inches) high.
- B. Internal and external corners shall be formed to geometric shape generated by cove at either square or radius corners.

3.5 WELDING

A. Heat weld all joints of flooring and base using equipment and procedures recommended by flooring manufacturer.

- B. Welding shall consist of routing joint, inserting a welding rod into routed space, and terminally fusing into a homogeneous joint.
- C. Upon completion of welding, surface across joint shall finish flush, free from voids, and recessed or raised areas.
- D. Fusion of Material: Joint shall be fused a minimum of 65 percent through thickness of material, and after welding shall meet specified characteristics for flooring.

3.6 CLEANING

- A. Clean small adhesive marks during application of sheet flooring and base before adhesive sets, excessive adhesive smearing will not be accepted.
- B. Remove visible adhesive and other surface blemishes using methods and cleaner recommended by floor covering manufacturers.
- C. Clean and polish materials per flooring manufacturer's written recommendations.
- D. Vacuum floor thoroughly.
- E. Do not wash floor until after period recommended by floor covering manufacturer and then prepare in accordance with manufacturer's recommendations.
- F. Upon completion, Resident Engineer shall inspect floor and base to ascertain that work was done in accordance with manufacturer's printed instructions.
- G. Perform initial maintenance according to flooring manufacturer's written recommendations.
- H. Seal linoleum floors using LinoSEAL and then apply five (5) coats of Vectra Floor Finish, or equivalent materials. For vinyl floors, apply five (5) coats of Vectra Floor Finish or equivalent.

3.7 PROTECTION:

- A. Protect installed flooring as recommended by flooring manufacturer against damage from rolling loads, other trades, or placement of fixtures and furnishings.
- B. Keep traffic off sheet flooring for 24 hours after installation.
- C. Provide temporary cover as plywood with beveled strip to accommodate wheel chair and walker access for full length of new installation and for minimum of 24 hours or as needed to protect installation until adhesives are sufficiently set up to accept normal traffic.
- D. Where construction traffic is anticipated, cover sheet flooring with reinforced kraft paper properly secured and maintained until removal is authorized by the COTR.
- E. Where protective materials are removed and immediately prior to acceptance, repair any damage, re-clean sheet flooring, lightly re-apply polish and buff floor.

---END---

SECTION 09 72 00 VINYL/ACRYLIC RIGID WALL COVERINGS

PART 1 - GENERAL

1.1 DESCRIPTION

Section specifies rigid sheet wall covering, engineered molding accessories, and installation for wainscot system and pilaster wall bases and new skins for doors.

1.2 RELATED WORK

- A. Color, pattern, type and areas to receive wall covering: Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Handrails, Crash Rails, and Corner Guards: Section 10 26 00, WALL & DOOR PROTECTION.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples:
 - 1. Each type and pattern as specified in Section 09 06 00, SCHEDULE FOR FINISHES.
 - 2. Sizes: 152 mm X 254 mm (6 inch X 10 inch) rigid sheet material, 304.8 mm (12 inch) engineered moldings.
- C. Manufacturer's Certificates:
 - 1. Compliance with CFFA W-101D.
 - 2. Wall covering manufacturer's approval of adhesive.
- D. Manufacturer's Literature and Data:
 - 1. Primer and adhesive.
 - 2. Installation instructions.
 - 3. Maintenance instructions, including recommended materials and methods for maintaining wall covering with precautions in use of cleaning material.

1.4 QUALITY ASSURANCE

- A. Installer qualifications: Engage an installer who has no less that three (3) years experience in installation of systems similar in complexity to those required for this project.
- B. Manufacturer's qualifications: Not less than 5 years experience in the production of specified products and a record of successful in-service performance.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver in original unopened containers bearing the manufacturer's name, brand name, and product designation.
- B. Store in accordance with manufacturer's instructions. A minimum room temperature of 40 degrees F (4 degrees C) and a maximum of 100 degrees F (38 degrees C) should be maintained.
- C. Handle to prevent damage to material.

1.6 APPLICABLE PUBLICATIONS

A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in the text by the basic designation only.

B. American Society for Testing and Materials, E84

PART 2 – PRODUCTS

2.1 VINYL/ACRYLIC RIGID SHEET WALL COVERING

- A. Rigid sheet should be high impact vinyl/acrylic with 1.02 mm (.040 inch) thickness supplied in 1.22m X 2.44m or 3.05m (4' X 8' or 10') or 1.22m X 6.71m (4' X 22') rolls. Provide color-matched caulk or vinyl/acrylic trim as needed for joint/transitions.
 - 1. Peblette Texture on wainscot system components and pilaster wall bases.
 - 2. Woodgrain pattern with Suede texture on door skins.
- B. Fire Performance Characteristics: Provide wall protection system components with UL label indicating that they are identical to those tested in accordance wit ASTM-E84 for Class I characteristics listed below:
 - 1. Flame spread: 25 or less
 - 2. Smoke developed: 450 or less
- C. Impact Strength: Provide assembled wall protection units that have been tested in accordance with the applicable provisions of ASTM F476.
- D. Integral color with all colored components matched in accordance with SAE J 1545 to within plus or minus 1.0 of the CIE-LCH scales.
- E. Single source responsibility: Provide all components of the wall protection system manufactured by the same company to ensure compatibility of color, texture, and physical characteristics.

2.3 VINYL/ACRYLIC ENGINEERED MOLDINGS FOR WAINSCOT SYSTEM

- A. Vertical and horizontal moldings to be high impact vinyl/acrylic with nominal 1.02 mm (.040 inch) thickness factory bonded to a particle board core.
- B. Vertical and horizontal moldings to be 10 mm (3/8") thick X 51 mm (2") X 2.44 m (8') long per drawings.
- C. Inside/outside corners for wainscot application shall be 10 mm (3/8") thick X 51 mm (2") wide X 2.44 m (8') long.

2.2 ADHESIVE AND PRIMERS

A. Use only water-based adhesives and primers having volatile organic compounds not more than 50 g/l.

PART 3 - EXECUTION

3.1 JOB CONDITIONS

- A. Temperatures:
 - 1. Materials must be acclimated in an environment of 65-75 degrees F (18-24 degrees C) for at least 24 hours prior to beginning the installation.
 - 2. Installation areas must be enclosed and weather proofed before installation.
- B. Lighting:
 - 1. Do not proceed unless a minimum lighting level of 15 candlepower per square foot occurs
 - 2. Measure light level at mid-height of wall.
- C. Ventilation:
 - 1. Provide uniform continuous ventilation in space.

- 2. Ventilate for a time for not less than complete drying or curing of adhesive.
- D. Protect other surfaces from damage which may be caused by this work.
- E. Remove waste from building daily.

3.2 SURFACE CONDITION

- A. Inspect surfaces to receive wall coverings to assure that:
 - 1. Patches and repairs are completed.
 - 2. Surface are clean, smooth and prime painted.
- B. Do not proceed until discovered defects have been corrected by other trades and surfaces are ready to receive wall covering.
- C. Carefully remove electrical outlet and switch plates, mechanical diffusers, escutcheons, registers, surface hardware, fittings and fastenings, prior to starting work.
- D. Carefully store items for reinstallation.

3.3 INSTALLATION

- A. Install the work of this section in strict accordance with the manufacturer's recommendations, using approved adhesive.
- B. Temperature at the time of installation must be between 65-75 degrees F (18-24 degrees C) and be maintained for at least 48 hours after the installation to allow for proper adhesive set up.
- C. Relative humidity shall not exceed 80%.
- D. Do not expose wall covering to direct sunlight during or after installation. This will cause the surface temperature to rise, which in turn will cause bubbles and delamination.
- E. Install panels consecutively in order in which they are cut from the roll including filling spaces above or below windows, doors, or similar penetrations.

3.4 CLEANING AND PROTECTION

- A. General: Immediately upon completion of installation, clean wall covering and accessories in accordance with manufacturer's recommended cleaning method.
- B. Remove surplus materials, rubbish and debris resulting from installation as work progress and upon completion of work.
- C. Protect installed materials to prevent damage of other trades. Use materials that may be easily removed without leaving residue or permanent stains.



SECTION 09 91 00 PAINTING

PART 1-GENERAL

1.1 DESCRIPTION

- A. Section specifies field painting.
- B. Section specifies prime coats which may be applied in shop under other sections.
- C. Painting includes shellacs, stains, varnishes, caulking, and coatings specified.

1.2 RELATED WORK

- A. Type of Finish, Color, and Gloss Level of Finish Coat: Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Handrails, Crash Rails, and Corner Guards: Section 010 26 00, WALL & DOOR PROTECTION.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:

Before work is started, or sample panels are prepared, submit manufacturer's literature, the current Master Painters Institute (MPI) "Approved Product List" indicating brand label, product name and product code as of the date of contract award, will be used to determine compliance with the submittal requirements of this specification. The Contractor may choose to use subsequent MPI "Approved Product List", however, only one list may be used for the entire contract and each coating system is to be from a single manufacturer. All coats on a particular substrate must be from a single manufacturer. No variation from the MPI "Approved Product List" where applicable is acceptable.

C. Sample Panels:

- 1. After painters' materials have been approved and before work is started submit sample panels showing each type of finish and color specified.
- 2. Panels to show color: Composition board, 100 by 250 by 3 mm (4 inch by 10 inch by 1/8 inch).
- 3. Panel to show transparent finishes: Wood of same species and grain pattern as wood approved for use, 100 by 250 by 3 mm (4 inch by 10 inch face by 1/4 inch) thick minimum, and where both flat and edge grain will be exposed, 250 mm (10 inches) long by sufficient size, 50 by 50 mm (2 by 2 inch) minimum or actual wood member to show complete finish.
- 4. Attach labels to panel stating the following:
 - a. Federal Specification Number or manufacturers name and product number of paints used.
 - b. Specification code number specified in Section 09 06 00, SCHEDULE FOR FINISHES.
 - c. Product type and color.
 - d. Name of project.
- 5. Strips showing not less than 50 mm (2 inch) wide strips of undercoats and 100 mm (4 inch) wide strip of finish coat.

- D. Sample of identity markers if used.
- E. Final stain and sealer samples on hardwood stock to be used for wood base cap and window trim minimum 6".
- F. Manufacturers' Certificates indicating compliance with specified requirements:
 - 1. Manufacturer's paint substituted for Federal Specification paints meets or exceeds performance of paint specified.
 - 2. High temperature aluminum paint.
 - 3. Epoxy coating.
 - 4. Intumescent clear coating or fire retardant paint.

1.4 DELIVERY AND STORAGE

- A. Deliver materials to site in manufacturer's sealed container marked to show following:
 - 1. Name of manufacturer.
 - 2. Product type.
 - 3. Batch number.
 - 4. Instructions for use.
 - 5. Safety precautions.
- B. In addition to manufacturer's label, provide a label legibly printed as following:
 - 1. Federal Specification Number, where applicable, and name of material.
 - 2. Surface upon which material is to be applied.
 - 3. If paint or other coating, state coat types; prime, body or finish.
- C. Maintain space for storage, and handling of painting materials and equipment in a neat and orderly condition to prevent spontaneous combustion from occurring or igniting adjacent items.
- D. Store materials at site at least 24 hours before using, at a temperature between 18 and 30 degrees C (65 and 85 degrees F).

1.5 MOCK-UP PANEL

- A. Before starting application of water paint mixtures, apply paint as specified to an area, not to exceed 9 m² (100 ft²), selected by COTR.
- B. Finish and texture approved by COTR will be used as a standard of quality for remainder of work.

1.6 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in the text by basic designation only.
- B. American Conference of Governmental Industrial Hygienists (ACGIH):

ACGIH TLV-BKLT-2008Threshold Limit Values (TLV) for Chemical Substances and Physical Agents and Biological Exposure Indices (BEIs)

ACGIH TLV-DOC-2008Documentation of Threshold Limit Values and Biological Exposure Indices, (Seventh Edition)

C. American Society for Testing and Materials (ASTM):

D260-86.....Boiled Linseed Oil

D. Master Painters Institute (MPI):

No. 31-07Polyurethane, Moisture Cured, Clear Gloss (PV)

No. 36-07Knot Sealer

No. 43-07Interior Satin Latex, MPI Gloss Level 4

	No. 44-07	Interior Low Sheen Latex, MPI Gloss Level 2
	No. 45-07	Interior Primer Sealer
	No. 46-07	Interior Enamel Undercoat
	No. 50-07	Interior Latex Primer Sealer
	No. 52-07	Interior Latex, MPI Gloss Level 3 (LE)
	No. 53-07	Interior Latex, Flat, MPI Gloss Level 1 (LE)
	No. 54-07	Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)
	No. 90-07	Interior Wood Stain, Semi-Transparent (WS)
	No. 91-07	Wood Filler Paste
	No. 143-07	Latex, Interior, Institutional Low Odor/VOC, Flat,
(MPI Gloss Level 1)		
	No. 145-07	Latex, Interior, Institutional Low Odor/VOC,
		(MPI Gloss Level 3)
	No. 147-07	Latex, Interior, Institutional Low Odor/VOC,
		(MPI Gloss Level 5)
	No. 149-07	Primer Sealer, Interior, Institutional Low Odor/VOC

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wood Sealer: MPI 31 (gloss) or MPI 71 (flat) thinned with thinner recommended by manufacturer at rate of about one part of thinner to four parts of varnish.
- B. Plastic Tape:
 - 1. Pigmented vinyl plastic film in colors as specified in Section 09 06 00, SCHEDULE FOR FINISHES or specified.
 - 2. Pressure sensitive adhesive back.
 - 3. Widths as shown.
- C. Knot Sealer: MPI 36.
- D. Interior Latex, Institutional Low Odor/VOC: MPI 143 Gloss Level 1.
- E. Interior Latex, Institutional Low Odor/VOC: MPI 145 Gloss Level 3.
- F. Interior Latex, Institutional Low Odor/VOC: MPI 147 Gloss Level 5.
- G. Primer Sealer, Interior Institutional Low Odor/VOC: MPI 149.
- H. Interior Wood Stain, Semi-Transparent (WS): MPI 90.
- I. Wood Filler Paste: MPI 91.
- J. Caulking compatible with finishes as approved by manufacturer.

2.2 PAINT PROPERTIES

- A. Use ready-mixed (including colors), except two component epoxies, polyurethanes, polyesters, paints having metallic powders packaged separately and paints requiring specified additives.
- B. Where no requirements are given in the referenced specifications for primers, use primers with pigment and vehicle, compatible with substrate and finish coats specified.

2.3 REGULATORY REQUIREMENTS/QUALITY ASSURANCE

- A. Paint materials shall conform to the restrictions of the local Environmental and Toxic Control jurisdiction.
 - 1. Volatile Organic Compounds (VOC): VOC content of paint materials shall not exceed 10g/l for interior latex paints/primers and 50g/l for exterior latex paints and primers.

2. Lead-Base Paint:

- a. Comply with Section 410 of the Lead-Based Paint Poisoning Prevention Act, as amended, and with implementing regulations promulgated by Secretary of Housing and Urban Development.
- b. Regulations concerning prohibition against use of lead-based paint in federal and federally assisted construction, or rehabilitation of residential structures are set forth in Subpart F, Title 24, Code of Federal Regulations, Department of Housing and Urban Development.
- c. For lead-paint removal, see Section 02 83 33.13, LEAD-BASED PAINT REMOVAL AND DISPOSAL.
- 3. Asbestos: Materials shall not contain asbestos.
- 4. Chromate, Cadmium, Mercury, and Silica: Materials shall not contain zinc-chromate, strontium-chromate, Cadmium, mercury or mercury compounds or free crystalline silica.
- 5. Human Carcinogens: Materials shall not contain any of the ACGIH-BKLT and ACGHI-DOC confirmed or suspected human carcinogens.
- 6. Use high performance acrylic paints in place of alkyd paints, where possible.
- 7. VOC content for solvent-based paints shall not exceed 250g/l and shall not be formulated with more than one percent aromatic hydro carbons by weight.

PART 3 - EXECUTION

3.1 JOB CONDITIONS

- A. Safety: Observe required safety regulations and manufacturer's warning and instructions for storage, handling and application of painting materials.
 - 1. Take necessary precautions to protect personnel and property from hazards due to falls, injuries, toxic fumes, fire, explosion, or other harm.
 - 2. Deposit soiled cleaning rags and waste materials in metal containers approved for that purpose. Dispose of such items off the site at end of each days work.
- B. Atmospheric and Surface Conditions:
 - 1. Do not apply coating when air or substrate conditions are:
 - a. Less than 3 degrees C (5 degrees F) above dew point.
 - b. Below 10 degrees C (50 degrees F) or over 35 degrees C (95 degrees F), unless specifically pre-approved by the COTR and the product manufacturer. Under no circumstances shall application conditions exceed manufacturer recommendations.
 - 2. Maintain interior temperatures until paint dries hard.
 - 3. Do not paint in direct sunlight or on surfaces that the sun will soon warm.
 - 4. Apply only on clean, dry and frost free surfaces except as follows:
 - a. Apply water thinned acrylic and cementitious paints to damp (not wet) surfaces where allowed by manufacturer's printed instructions.
 - b. Dampened with a fine mist of water on hot dry days concrete and masonry surfaces to which water thinned acrylic and cementitious paints are applied to prevent excessive suction and to cool surface.
 - 5. Varnishing:
 - a. Apply in clean areas and in still air.
 - b. Before varnishing vacuum and dust area.
 - c. Immediately before varnishing wipe down surfaces with a tack rag.

3.2 SURFACE PREPARATION

A. Method of surface preparation is optional, provided results of finish painting produce solid even color and texture specified with no overlays.

B. General:

- 1. Remove prefinished items not to be painted such as lighting fixtures, escutcheon plates, hardware, trim, and similar items for reinstallation after paint is dried.
- 2. Remove items for reinstallation and complete painting of such items and adjacent areas when item or adjacent surface is not accessible or finish is different.
- 3. See other sections of specifications for specified surface conditions and prime coat.
- 4. Clean surfaces for painting with materials and methods compatible with substrate and specified finish. Remove any residue remaining from cleaning agents used. Do not use solvents, acid, or steam on concrete and masonry.
- 5. Complete caulking and sanding any gap to adjacent surface prior to starting priming and painting.

C. Wood:

- 1. Sand to a smooth even surface and then dust off.
- 2. Sand surfaces showing raised grain smooth between each coat.
- 3. Wipe surface with a tack rag prior to applying finish.
- 4. Surface painted with an opaque finish:
 - a. Coat knots, sap and pitch streaks with MPI 36 (Knot Sealer) before applying paint.
 - b. Apply two coats of MPI 36 (Knot Sealer) over large knots.
- 5. After application of prime or first coat of stain, fill cracks, nail and screw holes, depressions and similar defects with wood filler paste. Sand the surface to make smooth and finish flush with adjacent surface.
- 6. Before applying finish coat, reapply wood filler paste if required, and sand surface to remove surface blemishes. Finish flush with adjacent surfaces.
- 7. Fill open grained wood such as oak, walnut, ash and mahogany with MPI 91 (Wood Filler Paste), colored to match wood color.
 - a. Thin filler in accordance with manufacturer's instructions for application.
 - b. Remove excess filler, wipe as clean as possible, dry, and sand as specified.

D. Gypsum Board:

- 1. Remove efflorescence, loose and chalking plaster or finishing materials.
- 2. Remove dust, dirt, and other deterrents to paint adhesion.
- 3. Fill holes, cracks, and other depressions with CID-A-A-1272A [Plaster, Gypsum (Spackling Compound) finished flush with adjacent surface, with texture to match texture of adjacent surface. Patch holes over 25 mm (1-inch) in diameter as specified in Section for plaster or gypsum board.

3.3 PAINT PREPARATION

- A. Thoroughly mix painting materials to ensure uniformity of color, complete dispersion of pigment and uniform composition.
- B. Do not thin unless necessary for application and when finish paint is used for body and prime coats. Use materials and quantities for thinning as specified in manufacturer's printed instructions.

- C. Remove paint skins, then strain paint through commercial paint strainer to remove lumps and other particles.
- D. Mix two component and two part paint and those requiring additives in such a manner as to uniformly blend as specified in manufacturer's printed instructions unless specified otherwise.
- E. For tinting required to produce exact shades specified, use color pigment recommended by the paint manufacturer.

3.4 APPLICATION

- A. Start of surface preparation or painting will be construed as acceptance of the surface as satisfactory for the application of materials.
- B. Unless otherwise specified, apply paint in three coats; prime, body, and finish. When two coats applied to prime coat are the same, first coat applied over primer is body coat and second coat is finish coat.
- C. Apply each coat evenly and cover substrate completely.
- D. Allow not less than 48 hours between application of succeeding coats, except as allowed by manufacturer's printed instructions, and approved by COTR.
- E. Finish surfaces to show solid even color, free from runs, lumps, brush marks, laps, holidays, or other defects.
- F. Apply by brush, roller or spray, except as otherwise specified. Apply paint on hollow metal door frames with spray application only.
- G. Do not spray paint in existing occupied spaces unless approved by COTR, except in spaces sealed from existing occupied spaces.
 - 1. Apply painting materials specifically required by manufacturer to be applied by spraying.
 - 2. In areas, where paint is applied by spray, mask or enclose with polyethylene, or similar air tight material with edges and seams continuously sealed including items specified in WORK NOT PAINTED, motors, controls, telephone, and electrical equipment, fronts of sterilizes and other recessed equipment and similar prefinished items.
- H. Do not paint in closed position operable items such as access doors and panels, window sashes, overhead doors, and similar items except overhead roll-up doors and shutters.

3.5 PRIME PAINTING

- A. After surface preparation prime surfaces before application of body and finish coats, except as otherwise specified.
- B. Spot prime and apply body coat to damaged and abraded painted surfaces before applying succeeding coats.
- C. Additional field applied prime coats over shop or factory applied prime coats are not required except for exterior exposed steel apply an additional prime coat.
- D. Prime rebates for stop and face glazing of wood, and for face glazing of steel.
- E. Wood and Wood Particleboard:
 - 1. Use same kind of primer specified for exposed face surface.
 - a. Exterior wood: MPI 7 (Exterior Oil Wood Primer) for new construction and MPI 5(Exterior Alkyd Wood Primer) for repainting bare wood primer except where MPI 90 (Interior Wood Stain, Semi-Transparent (WS)) is scheduled.
 - b. Interior wood except for transparent finish: MPI 45 (Interior Primer Sealer) or MPI 46 (Interior Enamel Undercoat), thinned if recommended by manufacturer.

- c. Transparent finishes as specified under Transparent Finishes on Wood.
- 2. Apply two coats of primer MPI 7 (Exterior Oil Wood Primer) or MPI 5 (Exterior Alkyd Wood Primer) or sealer MPI 45 (Interior Primer Sealer) or MPI 46 (Interior Enamel Undercoat) to surfaces of wood doors, including top and bottom edges, which are cut for fitting or for other reason.
- 3. Apply one coat of primer MPI 7 (Exterior Oil Wood Primer) or MPI 5 (Exterior Alkyd Wood Primer) or sealer MPI 45 (Interior Primer Sealer) or MPI 46 (Interior Enamel Undercoat) as soon as delivered to site to surfaces of unfinished woodwork, except concealed surfaces of shop fabricated or assembled millwork and surfaces specified to have varnish, stain or natural finish.
- 4. Back prime and seal ends of exterior woodwork, and edges of exterior plywood specified to be finished.

F. Gypsum Board:

- 1. Surfaces scheduled to have MPI 53 (Interior Latex, Flat), MPI Gloss Level 1 LE)), MPI 52 (Interior Latex, MPI Gloss Level 3 (LE)), MPI 54 (Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)) or MPI 114 (Interior Latex, Gloss (LE) and (LG)) finish: Use // MPI 53 (Interior Latex, MPI Gloss Level 3 (LE)), MPI 52 (Interior Latex, MPI Gloss Level 3 (LE)), MPI 54 (Interior Latex, Semi-Gloss, MPI Gloss Level 5 (LE)) or MPI 114 (Interior Latex, Gloss (LE) and (LG)) respectively.
- 2. Primer: MPI 50(Interior Latex Primer Sealer).
- 3. Surfaces scheduled to receive vinyl coated fabric wallcovering: Use MPI 45 (Interior Primer Sealer).

3.6 INTERIOR FINISHES

- A. Apply following finish coats over prime coats in spaces or on surfaces specified in Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Metal Work:
 - 1. Apply to exposed surfaces.
 - 2. Omit body and finish coats on surfaces concealed after installation except electrical conduit containing conductors over 600 volts.

C. Gypsum Board:

- 1. One coat of MPI 45 (Interior Primer Sealer) or MPI 46 (Interior Enamel Undercoat) plus one coat of MPI 139 (Interior High Performance Latex, MPI Gloss level 3 (LL)).
- 2. Two coats of MPI 138 (Interior High Performance Latex, MPI Gloss Level 2 (LF)).

D. Wood:

- 1. Sanding:
 - a. Use 220-grit sandpaper.
 - b. Sand sealers and varnish between coats.
 - c. Sand enough to scarify surface to assure good adhesion of subsequent coats, to level roughly applied sealer and varnish, and to knock off "whiskers" of any raised grain as well as dust particles.

2. Sealers:

- a. Apply sealers specified except sealer may be omitted where pigmented, penetrating, or wiping stains containing resins are used.
- b. Allow manufacturer's recommended drying time before sanding, but not less than 24 hours or 36 hours in damp or muggy weather.

- c. Sand as specified.
- 3. Transparent Finishes on Wood Except Floors.
 - a. Natural Finish:
 - 1) One coat of sealer as written in 2.1 G.
 - 2) Two coats of MPI 31 (Polyurethane, Moisture Cured, Clear Gloss (PV).
 - b. Stain Finish:
 - 1) One coat of MPI 90 (Interior Wood Stain, Semi-Transparent (WS)).
 - 2) Use wood stain of type and color required to achieve finish specified. Do not use varnish type stains.
 - 3) One coat of sealer as written in 2.1 G.
 - 4) Two coats of MPI 31 (Polyurethane Moisture Cured, Clear Gloss (PV)).

E. Miscellaneous:

- 1. Apply where specified in Section 09 06 00, SCHEDULE FOR FINISHES.
- 2. MPI 1 (Aluminum Paint): Two coats of aluminum paint.

3.7 PAINT COLOR

- A. Color and gloss of finish coats is specified in Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Coat Colors:
 - 1. Color of priming coat: Lighter than body coat.
 - 2. Color of body coat: Lighter than finish coat.
 - 3. Color prime and body coats to not show through the finish coat and to mask surface imperfections or contrasts.

3.8 PROTECTION CLEAN UP, AND TOUCH-UP

- A. Protect work from paint droppings and spattering by use of masking, drop cloths, removal of items or by other approved methods.
- B. Upon completion, clean paint from hardware, glass and other surfaces and items not required to be painted of paint drops or smears.
- C. Before final inspection, touch-up or refinished in a manner to produce solid even color and finish texture, free from defects in work which was damaged or discolored.

---END---

SECTION 10 11 23 TACKBOARDS

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies linoleum resilient tackable material for display niches, as shown in drawings.

1.2 RELATED WORK

Color of linoleum: Section 09 06 00, SCHEDULE FOR FINISHES

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
- B. Manufacturer's Literature and Data:
 - Linoleum resilient tackable material.
- D. Samples:
 - 1. Tackable material, 300 by 300 mm (six by six inches), each color, mounted on backing.

1.4 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - E 84Fuel Contribution Class B
- C. NFPA 253.....Critical Radiant Flux Class II

PART 2 - PRODUCTS

2.1 DISPLAY NICHES/BULLETIN BOARDS

A. Materials:

- 1. Homogenous linoleum tackable surface material of natural materials consisting of linseed oil, granulated cork, resin binders and dry pigments, mixed and colendered onto a natural burlap backing. Material to contain no harmful by-products or carciniogens.
- 2. Uni-color extends throughout thickness of material.
- 3. 6.0 mm (1/4") thick, 122 cm X 183 cm (48" and 72"), and 29 lineal meters (95 linear ft) long.
- 4. Material to be anti-static, anti-microbial, chemical resistant and washable finish to retain original appearance
- 5. Material to be self-healing to thumbtacks and pin punctures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Inspect surfaces and related construction to receive material.
- B. Do not proceed with the installation until surfaces to receive material are flat and plumb.

C. Install tackable material in accordance with the manufacturer's installation instructions using recommended adhesives.

---END---

SECTION 10 26 00 WALL AND DOOR PROTECTION

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies corner guards, handrail/crash rail combinations, and crash rails.

1.2 RELATED WORK

- A. Armor plates and kick plates not specified in this section: Section 08 71 00, DOOR HARDWARE.
- B. Color and texture of resilient material: Section 09 06 00, SCHEDULE FOR FINISHES.
- C. Vinyl/Acrylic Wainscot System: Section 09 72 00, VINYL/ACRYLIC RIGID WALL COVERING.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Shop Drawings: Show design and installation details.
- C. Manufacturer's Literature and Data:
 - 1. Crash Rails.
 - 2. Handrail/Crash Rail Combinations.
 - 3. Corner Guards.
- D. Test Report: Showing that resilient material complies with specified fire and safety code requirements.

1.4 DELIVERY AND STORAGE

- A. Deliver materials to the site in original sealed packages or containers marked with the name and brand, or trademark of the manufacturer.
- B. Protect from damage from handling and construction operations before, during and after installation.
- C. Store in a dry environment of approximately 21° C (70 degrees F) for at least 48 hours prior to installation.

1.5 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.
- B. American Society for Testing and Materials (ASTM):

A167-99(R2004)	Stainless and Heat-Resisting Chromium-Nickel Steel Plate,
	Sheet, and Strip
B221-07	Aluminum and Aluminum-Alloy Extruded Bars, Rods,

Wire, Shapes, and Tubes
D256-06Impact Resistance of Plastics

E84-07.....Surface Burning Characteristics of Building Materials

C. The National Association of Architectural Metal Manufacturers (NAAMM):

- AMP 500 SeriesMetal Finishes Manual
- D. National Fire Protection Association (NFPA):

80-06Standard for Fire Doors and Windows

E. Underwriters Laboratories Inc. (UL):

Annual Issue.....Building Materials Directory

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Extruded: ASTM B221, Alloy 6063, Temper T5 or T6.
- B. Resilient Material:
 - 1. Extruded and injection molded non-PVC thermoplastic meeting following requirements:
 - a. Minimum impact resistance of 19 ft-lbs/inch of thickness when tested in accordance with ASTM D256 (Izod impact, ft.lbs. per inch notch).
 - b. Class A fire rating when tested in accordance with ASTM E84, having a maximum flame spread of 25 and a smoke developed rating of 450 or less.
 - c. Rated self extinguishing when tested in accordance with ASTM D635.
 - d. Chemical and stain resistance: ASTM D1308.
 - e. Material shall be labeled and tested by Underwriters Laboratories (UL) or other approved independent testing laboratory.
 - f. Integral color with all colored components matched in accordance with SAE J 1545 to within plus or minus 1.0 on the CIE-LCH scales.
 - g. Same finish on exposed surfaces.

2.2 CORNER GUARDS

- A. Resilient, Shock-Absorbing Corner Guards: Surface mounted 50.8 mm (2 inches), formed to profile shown and field cut to lengths shown.
 - 1. Snap-on corner guard formed from chemical and stain-resistant non-PVC resilient material, minimum 2 mm (0.078-inch) thick, free floating on a continuous 1.6 mm (0.063-inch) thick extruded aluminum retainer. Provide appropriate mounting hardware, cushions and base plates as required.
 - 2. Provide factory fabricated end closure caps at top and bottom of surface mounted corner guards.
 - 3. Install to finished floor or to top of integral cove base trim as indicated in Drawings. Where required, cut to fit height indicated on drawings.

2.3 CRASH RAILS AND HANDRAILS

- A. Resilient Crash Rails and Handrails:
 - 1. Stainless Steel Handrail with Integral Crash Rail:
 - a. Surface mounted handrail/crash rail configuration with end caps returning to the wall where indicated in Drawings. Terminate at pilasters as indicated in Drawings. Attachment hardware shall be appropriate for wall construction.
 - b. 161.9 mm (6-3/8 inches) handrail/crash rail configuration consisting of a round stainless steel and PVC-free thermoplastic crash rail with matching end caps where required.
 - c. Stainless Steel: Type 304 alloy with #4 satin finish, nominal 6.35 mm (1/4 inch) thickness.

- d. Dual cantilevered mounting brackets to be powder-coated aluminum, 6063-T6 alloy, nominal 1.52 mm (.060 inches).
- e. Aluminum: Extruded aluminum crash rail retainer 1063-T6 alloy, nominal 1.57 mm (.062 inches).
- f. Provide handrails with prefabricated end closure caps, inside and outside corners (90 degrees and 135 degrees), concealed splices, cushions, mounting hardware and other accessories as required (where indicated in Drawings).
- g. Prefabricated end caps and inside and outside corners are to be color matched. End caps and corners shall be field adjustable to assure close alignment with handrails and crash guards. Screw or bolt closure caps to aluminum retainer.
- 2. Crash Rails: 101.6 mm (4 inch) height. Snap-on covers of chemical and stain-resistant non-PVC resilient material, minimum 1.98 mm (0.78-inch) thick, shall be free-floated on continuous, extruded aluminum retainer, minimum 1.57 mm (0.062-inch) thick, anchored to wall at maximum 600 mm (24 inches) on center.
 - a. Where indicated in Drawings, provide crash rails with prefabricated end closure caps, inside and outside corners, concealed splices, cushions, mounting hardware and other accessories as required.
 - b. End caps and corners shall be field adjustable to assure close alignment with handrails and crash rails. Screw or bolt closure caps to aluminum retainer.

2.4 FASTENERS AND ANCHORS

- A. Provide fasteners and anchors as required for each specific type of installation.
- B. Where type, size, spacing or method of fastening is not shown or specified, submit shop drawings showing proposed installation details.

2.5 FINISH

- A. In accordance with NAAMM AMP 500 series.
- B. Concealed Aluminum: Mill finish as fabricated, uniform in color and free from surface blemishes.
- C. Stainless Steel: NAAMM finish Number 4.
- D. Resilient Material: Embossed texture and color in accordance with SAE J 1545 and as specified in Section 09 06 00, SCHEDULE FOR FINISHES.

PART 3 - INSTALLATION

3.1 RESILIENT CORNER GUARDS

- A. Install corner guards on walls in accordance with manufacturer's instructions.
- B. Trim all components to the size indicated in Drawings.
- C. Mount corner guards on external corners of walls and pilasters as shown.

3.2 RESILIENT HANDRAIL/CRASH RAIL COMBINATIONS AND RESILIENT CRASH RAILS

A. Secure all hand and crash rails in strict accordance with the manufacturer's recommendations, using only approved mounting hardware, and locating all components firmly into position, level and plumb.

--- E N D ---

SECTION 10 44 13 FIRE EXTINGUISHER CABINETS

PART 1 - GENERAL

1.1 DESCRIPTION

This section covers recessed fire extinguisher cabinets.

1.2 RELATED WORK

- A. Acrylic glazing: Section 08 80 00, GLAZING.
- B. Field Painting: Section 09 91 00, PAINTING.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data: Fire extinguisher cabinet including installation instruction and rough opening required.

1.4 APPLICATION PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society of Testing and Materials (ASTM):

 D4802-02Poly (Methyl Methacrylate) Acrylic Plastic Sheet

PART 2 - PRODUCTS

2.1 FIRE EXTINGUISHER CABINET

Recessed type with flat trim of size and design shown.

2.2 FABRICATION

- A. Form body of cabinet from 0.9 mm (0.0359 inch) thick sheet steel.
- B. Fabricate door and trim from 1.2 mm (0.0478 inch) thick sheet steel with all face joints fully welded and ground smooth.
 - 1. Glaze doors with 6 mm (1/4 inch) thick ASTM D4802, clear acrylic sheet, Category B-1, Finish 1.
 - 2. Design doors to open 180 degrees.
 - 3. Provide continuous hinge, pull handle, and adjustable roller catch.

2.3 FINISH

- A. Finish interior of cabinet body with baked-on semigloss white enamel.
- B. Finish door, frame with manufacturer's standard baked-on prime coat suitable for field painting.

PART 3 - EXECUTION

- A. Install fire extinguisher cabinets in prepared openings and secure in accordance with manufacturer's instructions.
- B. Install cabinet so that bottom of cabinet is 975 mm (39 inches) above finished floor.

--- E N D ---

SECTION 26 51 00 INTERIOR LIGHTING

PART 1 - GENERAL

1.1 DESCRIPTION:

This section specifies the furnishing, installation and connection of the interior lighting systems and controls. It is intended that new fixtures be compatible to existing with regards to operation and lamps. Field verify existing conditions prior to selection and submittal. Where conflicts are found between this specification and existing conditions in the field. Bring them to the COTR prior to proceeding.

1.2 RELATED WORK

- A. Section 09 51 00 ACOUSTIC CEILINGS (Requirement for seismic restraint for nonstructural Components)
- B. VA STANDARD SPECIFICATION, Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS: General requirements that are common to more than one section of Division 26.
- C. VA STANDARD SPECIFICATION, Section 26 27 26, WIRING DEVICES: Wiring devices used for control of the lighting systems.

1.3 QUALITY ASSURANCE

Refer to Paragraph, QUALIFICATIONS, in Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS. This specification is intended to set a minimum standard for fixtures and installation.

1.4 SUBMITTALS

- A. Design-Build: This work is infill to existing system. Provide on site survey and engineering to verify existing conditions all to accommodate adding new fixtures and switching. Provide engineering and documentation as needed to secure approval of the VA and Agency having jurisdiction for approval.
- B. In accordance with Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS, submit the following:
- C. Product Data: For each type of lighting fixture (luminaire) designated on the CEILING (AND LIGHTING FIXTURE) LEGEND, arranged in order of fixture designation, submit the following information.
 - 1. Material and construction details include information on housing, optics system and lens/diffuser.
 - 2. Physical dimensions and description.
 - 3. Wiring schematic and connection diagram.
 - 4. Installation details.
 - 5. Energy efficiency data.
 - 6. Photometric data based on laboratory tests complying with IESNA Lighting Measurements, testing and calculation guides.
 - 7. Lamp data including lumen output (initial and mean), color rendition index (CRI), rated life (hours) and color temperature (degrees Kelvin).

8. Ballast data including ballast type, starting method, ambient temperature, ballast factor, sound rating, system watts and total harmonic distortion (THD).

D. Manuals:

- 1. Submit, simultaneously with the shop drawings companion copies of complete maintenance and operating manuals including technical data sheets, and information for ordering replacement parts.
- 2. Two weeks prior to the final inspection, submit four copies of the final updated maintenance and operating manuals, including any changes, to the COTR.

E. Certifications:

- 1. Two weeks prior to final inspection, submit four copies of the following certifications to the COTR:
 - a. Certification by the Contractor that the equipment has been properly installed, adjusted, and tested.

1.5 APPLICABLE PUBLICATIONS

- A. Publications listed below (including amendments, addenda, revisions, supplements, and errata) form a part of this specification to the extent referenced. Publications are referenced in the text by designation only.
- B. Institute of Electrical and Electronic Engineers (IEEE):
 - C62.41-91.....Guide on the Surge Environment in Low Voltage (1000V and less) AC Power Circuits
- C. National Fire Protection Association (NFPA):
 - 70.....National Electrical Code (NEC)
 - 101.....Life Safety Code
- D. National Electrical Manufacturer's Association (NEMA):
 - C82.1-97.....Ballasts for Fluorescent Lamps Specifications
 - C82.2-02.....Method of Measurement of Fluorescent Lamp Ballasts
 - C82.4-02.....Ballasts for High-Intensity-Discharge and Low-Pressure Sodium Lamps
 - C82.11-02......High Frequency Fluorescent Lamp Ballasts
- E. Underwriters Laboratories, Inc. (UL):
 - 496-96 Edison-Base Lampholders
 - 542-99Lampholders, Starters, and Starter Holders for Fluorescent

Lamps

844-95 Electric Lighting Fixtures for Use in Hazardous (Classified)

Locations

924-95 Emergency Lighting and Power Equipment

935-01Fluorescent-Lamp Ballasts

1029-94High-Intensity-Discharge Lamp Ballasts

1029A-06.....Ignitors and Related Auxiliaries for HID Lamp Ballasts

1598-00Luminaires

1574-04.....Standard for Track Lighting Systems

2108-04.....Standard for Low-Voltage Lighting Systems

8750-08.....Light Emitting Diode (LED) Light Sources for Use in Lighting Products

F. Federal Communications Commission (FCC):

Code of Federal Regulations (CFR), Title 47, Part 18

PART 2 - PRODUCTS

2.1 LIGHTING FIXTURES (LUMINAIRES)

A. Shall be in accordance with NFPA 70 and UL 1598, as shown on drawings, and as specified.

B. Sheet Metal:

- 1. Shall be formed to prevent warping and sagging. Housing, trim and lens frame shall be true, straight (unless intentionally curved) and parallel to each other as designed.
- 2. Wireways and fittings shall be free of burrs and sharp edges and shall accommodate internal and branch circuit wiring without damage to the wiring.
- 3. When installed, any exposed fixture housing surface, trim frame, door frame and lens frame shall be free of light leaks; lens doors shall close in a light tight manner.
- 4. Hinged door closure frames shall operate smoothly without binding when the fixture is in the installed position, latches shall function easily by finger action without the use of tools.
- C. Ballasts shall be serviceable while the fixture is in its normally installed position, and shall not be mounted to removable reflectors or wireway covers unless so specified.

D. Lamp Sockets:

- 1. Fluorescent: Lampholder contacts shall be the biting edge type or phosphorous-bronze with silver flash contact surface type and shall conform to the applicable requirements of UL 542. Lamp holders for bi-pin lamps shall be of the telescoping compression type, or of the single slot entry type requiring a one-quarter turn of the lamp after insertion.
- 2. High Intensity Discharge (H.I.D.): Shall have porcelain enclosures.
- E. Recessed fixtures mounted in an insulated ceiling shall be listed for use in insulated ceilings.
- F. Mechanical Safety: Lighting fixture closures (lens doors, trim frame, hinged housings, etc.) shall be retained in a secure manner by captive screws, chains, captive hinges or fasteners such that they cannot be accidentally dislodged during normal operation or routine maintenance.

G. Metal Finishes:

- 1. The manufacturer shall apply standard finish (unless otherwise specified) over a corrosion resistant primer, after cleaning to free the metal surfaces of rust, grease, dirt and other deposits. Edges of pre-finished sheet metal exposed during forming, stamping or shearing processes shall be finished in a similar corrosion resistant manner to match the adjacent surface(s). Fixture finish shall be free of stains or evidence of rusting, blistering, or flaking, and shall be applied after fabrication.
- 2. Interior light reflecting finishes shall be white with not less than 85 percent reflectances, except where otherwise shown on the drawing.
- 3. Exterior finishes shall be as shown on the drawings.
- H. Lighting fixtures shall have a specific means for grounding metallic wireways and housings to an equipment grounding conductor.
- I. Light Transmitting Components for Fluorescent Fixtures:
 - 1. Shall be 100 percent virgin acrylic.

- 2. Flat lens panels shall have not less than 1/8 inch [3.2mm] of average thickness. The average thickness shall be determined by adding the maximum thickness to the minimum unpenetrated thickness and dividing the sum by 2.
- 3. Unless otherwise specified, lenses, diffusers and louvers shall be retained firmly in a metal frame by clips or clamping ring in such a manner as to allow expansion and contraction of the lens without distortion or cracking.
- J. Lighting fixtures in hazardous areas shall be suitable for installation in Class and Group areas as defined in NFPA 70, and shall comply with UL 844.
- K. Compact fluorescent fixtures shall be manufactured specifically for compact fluorescent lamps with ballast integral to the fixture. Assemblies designed to retrofit incandescent fixtures are prohibited except when specifically indicated for renovation of existing fixtures (not the lamp). Fixtures shall be designed for lamps as specified.

2.2 BALLASTS

- A. Linear Fluorescent Lamp Ballasts: Multi-voltage (120 277V) electronic instant-start type, complying with UL 935 and with ANSI C 82.11, designed for type and quantity of lamps indicated. Ballast shall be designed for full light output unless dimmer or bi-level control is indicated; including the following features:
 - 1. Lamp end-of-life detection and shutdown circuit (T5 lamps only).
 - 2. Automatic lamp starting after lamp replacement.
 - 3. Sound Rating: Class A.
 - 4. Total Harmonic Distortion Rating: 10 percent or less.
 - 5. Transient Voltage Protection: IEEE C62.41.1 and IEEE C62.41.2, Category A or better.
 - 6. Operating Frequency: 20 kHz or higher.
 - 7. Lamp Current Crest Factor: 1.7 or less.
 - 8. Ballast Factor: 0.87 or higher unless otherwise indicated.
 - 9. Power Factor: 0.98 or higher.
 - 10. Interference: Comply with 47 CFT 18, Ch.1, Subpart C, for limitations on electromagnetic and radio-frequency interference for non-consumer equipment.
 - 11. To facilitate multi-level lamp switching, lamps within fixture shall be wired with the outermost lamp at both sides of the fixture on the same ballast, the next inward pair on another ballast and so on to the innermost lamp (or pair of lamps). Within a given room, each switch shall uniformly control the same corresponding lamp (or lamp pairs) in all fixture units that are being controlled.
 - 12. Where three-lamp fixtures are indicated, unless switching arrangements dictate otherwise, utilize a common two-lamp ballast to operate the center lamp in pairs of adjacent units that are mounted in a continuous row. The ballast fixture and slave-lamp fixture shall be factory wired with leads or plug devices to facilitate this circuiting. Individually mounted fixtures and the odd fixture in a row shall utilize a single-lamp ballast for operation of the center lamp.
 - 13. Dimming ballasts shall be as per above, except dimmable from 100% to 15% of rated lamp lumens.
- B. Low-Frequency Linear T8 Fluorescent Lamp Ballasts: Not used

- C. Compact Fluorescent Lamp Ballasts: Multi-voltage (120 277V), electronic-programmed rapid-start type, complying with UL 935 and with ANSI C 82.11, designed for type and quantity of lamps indicated. Ballast shall be designed for full light output unless dimmer or bi-level control is indicated; including the following features:
 - 1. Lamp end-of-life detection and shutdown circuit.
 - 2. Automatic lamp starting after lamp replacement.
 - 3. Sound Rating: Class A.
 - 4. Total Harmonic Distortion Rating: 10 percent or less.
 - 5. Transient Voltage Protection: IEEE C62.41.1 and IEEE C62.41.2, Category A or better
 - 6. Operating Frequency: 20 kHz or higher.
 - 7. Lamp Current Crest Factor: 1.7 or less.
 - 8. Ballast Factor: 0.95 or higher unless otherwise indicated.
 - 9. Power Factor: 0.98 or higher.
 - 10. Interference: Comply with 47 CFR 18, Ch. 1, Subpart C, for limitations on electromagnetic and radio-frequency interference for non-consumer equipment.
 - 11. Dimming ballasts shall be as per above, except dimmable from 100% to 15% of rated lamp lumens.
- D. BALLASTS FOR HIGH INTENSITY DISCHARGE FIXTURES: NOT USED
- E. ELECTRONIC BALLAST FOR HIGH INTENSITY: NOT USED

2.3 FLUORESCENT EMERGENCY BALLAST

- A. Self-contained, modular, battery-inverter unit, factory mounted within lighting fixture body and compatible with ballast. Comply with UL 924.
 - 1. Emergency Connection: Operate fluorescent lamp(s) continuously. Connect unswitched circuit to battery-inverter unit and switched circuit to fixture ballast.
 - 2. Test Push Button and Indicator Light: Visible and accessible without opening fixture or entering ceiling space.
 - a. Push Button: Push-to-test type, in unit housing, simulates loss of normal power and demonstrates unit operability.
 - b. Indicator Light: LED indicates normal power on. Normal glow indicates trickle charge; bright glow indicates charging at end of discharge cycle.
 - 3. Battery: Sealed, maintenance-free, nickel-cadmium type.
 - 4. Charger: Fully automatic, solid-state, constant-current type with sealed power transfer relay.
 - 5. Integral Self-Test: Automatically initiates test of unit emergency operation at required intervals. Test failure is annunciated by an integral audible alarm and a flashing LED.

2.4 EMERGENCY LIGHTING UNIT

- A. Complete, self-contained unit with batteries, battery charger, one or more local or remote lamp heads with lamps, under-voltage relay, and test switch. Comply with UL 924.
 - 1. Enclosure: Shall be impact-resistant thermoplastic, which will protect components from dust, moisture, and oxidizing fumes from the battery. Enclosure shall be suitable for the environmental conditions in which installed.

- 2. Lamp Heads: Horizontally and vertically adjustable, mounted on the face of the unit, except where otherwise indicated.
- 3. Lamps: Shall be sealed-beam MR-16 halogen, rated not less than 12 watts at the specified DC voltage.
- 4. Battery: Shall be maintenance-free nickel-cadmium. Minimum normal life shall be 10 years.
- 5. Battery Charger: Dry-type full-wave rectifier with charging rates to maintain the battery in fully-charged condition during normal operation, and to automatically recharge the battery within 12 hours following a 1-1/2 hour continuous discharge.
- 6. Integral Self-Test: Automatically initiates test of unit emergency operation at required intervals. Test failure is annunciated by an integral audible alarm and a flashing LED.

2.5 LAMPS

- A. Linear and U-shaped T5 and T8 Fluorescent Lamps:
 - 1. Rapid start fluorescent lamps shall comply with ANSI C78.1; and instant-start lamps shall comply with ANSI C78.3.
 - 2. Chromacity of fluorescent lamps shall comply with ANSI C78.376.
 - 3. Except as indicated below, lamps shall be low-mercury energy saving type, have a color temperature between 3500° and 4100°K, a Color Rendering Index (CRI) of greater than 70, average rated life of 20,000 hours, and be suitable for use with dimming ballasts, unless otherwise indicated. Low mercury lamps shall have passed the EPA Toxicity Characteristic Leachate Procedure (TCLP) for mercury by using the lamp sample preparation procedure described in NEMA LL 1.
 - a. Over the beds in Intensive Care, Coronary Care, Recovery, Life Support, and Observation and Treatment areas; Electromyographic, Autopsy (Necropsy), Surgery, and certain dental rooms (Examination, Oral Hygiene, Oral Surgery, Recovery, Labs, Treatment, and X-Ray) use color corrected lamps having a CRI of 85 or above and a correlated color temperature between 5000 and 6000°K.
 - b. Other areas as indicated on the drawings.
- B. Compact Fluorescent Lamps:
 - 1. T4, CRI 80 (minimum), color temperature 3500 K, and suitable for use with dimming ballasts, unless otherwise indicated.
- C. Long Twin-Tube Fluorescent Lamps:
 - 1. T5, CRI 80 (minimum), color temperature between 3500° and 4100°K, 20,000 hours average rated life.
- D. High Intensity Discharge Lamps: not used

2.6 RADIO-INTERFERENCE-FREE FLUORESCENT FIXTURES

- A. Shall be specially designed for suppressing radio-frequency energy produced within the fixtures. The Rules and Regulations of FCC (CFR 47, Part 18) shall apply.
- B. Lenses shall have a light-transparent layer of metal permanently bonded to them, and in positive contact with the steel housing or equal to prevent the radio-frequency interferences from passing through the lenses. The effective light transmittance of the lenses shall be not less than 75 percent.

- C. Install line filters within the body of the fixtures and wired in series with the supply circuit conductors to eliminate the transmission of radio frequency energy into the supply circuit.
- D. Ballasts shall be as specified herein.

2.7 FLUORESCENT BEDLIGHT FIXTURES: NOT USED

2.8 X-RAY FILM ILLUMINATORS: NOT USED

- **2.9 EXIT LIGHT FIXTURES:** Where requied by VA, NFPA 101, UL 924 or local Agency.
 - A. Exit light fixtures shall meet applicable requirements of NFPA 101 and UL 924.
 - B. Housing and Canopy:
 - 1. Shall be made of die-cast aluminum.
 - 2. Optional steel housing shall be a minimum 20 gauge thick or equivalent strength aluminum.
 - 3. Steel housing shall have baked enamel over corrosion resistant, matte black or ivory white primer.
 - C. Door frame shall be cast or extruded aluminum, and hinged with latch.
 - D. Finish shall be satin or fine-grain brushed aluminum.
 - E. There shall be no radioactive material used in the fixtures.
 - F. Fixtures:
 - 1. Maximum fixture wattage shall be 1 watt or less.
 - 2. Inscription panels shall be cast or stamped aluminum a minimum of 0.090 inch [2.25mm] thick, stenciled with 6 inch [150mm] high letters, baked with red color stable plastic or fiberglass. Lamps shall be luminous Light Emitting Diodes (LED) mounted in center of letters on red color stable plastic or fiberglass. The LED shall be rated minimum 25 years life.
 - 3. Double-Faced Fixtures: Provide double-faced fixtures where required or as shown on drawings.
 - 4. Directional Arrows: Provide directional arrows as part of the inscription panel where required or as shown on drawings. Directional arrows shall be the "chevron-type" of similar size and width as the letters and meet the requirements of NFPA 101.
 - G. Voltages: Refer to Lighting Fixture Schedule.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Installation shall be in accordance with the NEC, manufacturer's instructions and as shown on the drawings or specified.
- B. Align, mount and level the lighting fixtures uniformly.
- C. Fluorescent bed light fixtures shall be attached to the studs in the walls. Attachment to gypsum board only is not acceptable.
- D. Lighting Fixture Supports:
 - 1. Shall provide support for all of the fixtures. Supports may be anchored to channels of the ceiling construction, to the structural slab or to structural members within a partition, or above a suspended ceiling.
 - 2. Shall maintain the fixture positions after cleaning and relamping.
 - 3. Shall support the lighting fixtures without causing the ceiling or partition to deflect.

- 4. Hardware for recessed fluorescent fixtures:
 - a. Where the suspended ceiling system is supported at the four corners of the fixture opening, hardware devices shall clamp the fixture to the ceiling system structural members, or plaster frame at not less than four points in such a manner as to resist spreading of the support members and safely lock the fixture into the ceiling system.
 - b. Where the suspended ceiling system is not supported at the four corners of the fixture opening, hardware devices shall independently support the fixture from the building structure at four points.
- 5. Hardware for recessed lighting fixtures:
 - a. All fixture mounting devices connecting fixtures to the ceiling system or building structure shall have a capacity for a horizontal force of 100 percent of the fixture weight and a vertical force of 400 percent of the fixture weight.
 - b. Mounting devices shall clamp the fixture to the ceiling system structure (main grid runners or fixture framing cross runners) at four points in such a manner as to resist spreading of these supporting members. Each support point device shall utilize a screw or approved hardware to "lock" the fixture housing to the ceiling system, restraining the fixture from movement in any direction relative to the ceiling. The screw (size No. 10 minimum) or approved hardware shall pass through the ceiling member (T-bar, channel or spline), or it may extend over the inside of the flange of the channel (or spline) that faces away from the fixture, in a manner that prevents any fixture movement.
 - c. In addition to the above, the following is required for fixtures exceeding 20 pounds [9kg] in weight.
 - 1) Where fixtures mounted in ASTM Standard C635-69 "Intermediate" and "Heavy Duty" ceilings and weigh between 20 pounds and 56 pounds [9kg and 25kg] provide two 12 gauge safety hangers hung slack between diagonal corners of the fixture and the building structure.
 - 2) Where fixtures weigh over 56 pounds [25kg] they shall be independently supported from the building structure by approved hangers. Two-way angular bracing of hangers shall be provided to prevent lateral motion.
 - d. Where ceiling cross runners are installed for support of lighting fixtures, they must have a carrying capacity equal to that of the main ceiling runners and be rigidly secured to the main runners.
- 6. Single or double pendant-mounted lighting fixtures:
 - a. Each stem shall be supported by an approved outlet box, mounted swivel joint and canopy which holds the stem captive and provides spring load (or approved equivalent) dampening of fixture oscillations. Outlet box shall be supported vertically from the building structure.
- 7. Outlet boxes for support of lighting fixtures (where permitted) shall be secured directly to the building structure with approved devices or supported vertically in a hung ceiling from the building structure with a nine gauge wire hanger, and be secured by an approved device to a main ceiling runner or cross runner to prevent any horizontal movement relative to the ceiling.

- E. Furnish and install the specified lamps for all lighting fixtures installed and all existing lighting fixtures reinstalled under this project.
- F. Coordinate between the electrical and ceiling trades to ascertain that approved lighting fixtures are furnished in the proper sizes and installed with the proper devices (hangers, clips, trim frames, flanges), to match the ceiling system being installed.
- G. Bond lighting fixtures and metal accessories to the grounding system as specified in Section 26 05 26, GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS.
- H. Exercise electronic dimming ballasts over full range of dimming capability by operating the control devices(s) in the presence of the COTR. Observe for visually detectable flicker over full dimming range.
- I. Burn-in all lamps that require specific aging period to operate properly, prior to occupancy by Government. Burn-in period to be 40 hours minimum, unless a lesser period is specifically recommended by lamp manufacturer. Burn-in fluorescent and compact fluorescent lamps intended to be dimmed, for at least 100 hours at full voltage. Replace any lamps and ballasts which fail during burn-in.
- J. At completion of project, relamp/reballast fixtures which have failed lamps/ballasts. Clean fixtures, lenses, diffusers and louvers that have accumulated dust/dirt/fingerprints during construction. Replace damaged lenses, diffusers and louvers with new.
- K. Dispose of lamps per requirements of Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT.
- L. Controls: Existing controls are motion based or photodective devises. Existing Connecting Corridors controls will remain unchanged except as altered to accommodate build out of Intersections as shown. New Intersections will be motion controlled on new devises (match existing devices in use today or as approved by the COTR. Allow for daytime and nighttime lighting levels. Control of lighting is Building HUBs will be unchanged. New Sconce lighting will be controlled by switching in immediate area (ie) in new Intersections vs in Connecting Corridors.



SORCC Infection Control Assessment; Construction Areas

Approved: 7/25/12

Locatio	on of Co	onstruction: CC206 –CC209, CC219, CC220, CC239, B20	1 Rm 21	6A	Project Start Date: 6/2013	
Project Manager: Don Peccia			Estimated Duration: 180 Days			
Supervisor Area: Various Date Notified of Project:				Date Notified of Project:		
YES	NO	CONSTRUCTION ACTIVITY	YES	NO	INFECTION CONTROL RISK GROUP	
		TYPE A: Inspection, non-invasive activity.			GROUP 1: Least Risk	
		TYPE B: Small scale, short duration, minimal dust generating activity.			GROUP 2: Moderate Risk	
		TYPE C: Activity that generates moderate to high levels of dust requires greater than one work shift for completion.	X		GROUP 3: Medium Risk	
Х		TYPE D: Major duration and construction activities requiring consecutive work shifts.			GROUP 4: High Risk	
Class:		Class determined by completing above and referring to Construction Activity Infection Control Risk Level Matrix. Class should be mutually agreed upon by project manager and Infection Control staff with input from others as needed prior to start of project.				
CLASS (Circle that ap	2. Execute work by methods to minimize raising dust from construction operations.					
(Circle	1. Post Construction Signage at project start date. 2. Provide active means to prevent air-borne dust from construction operations. 3. Water mist work surfaces to control dust while cutting. 4. Seal unused doors with duct tape. 5. Block off and seal air vents. 6. Wipe work surfaces with disinfectant. 7. Contain construction waste before transport in tightly covered containers. 8. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. 9. Place dust mat at entrance and exit of work area. 10. Remove or isolate HVAC system in areas where work is being performed. 11. Other:					
(Circle	CLASS III Circle all that apply) 1. Obtain infection control approval before construction begins. 2. Notify Infection Control of project start date. 3. Post construction signage at project start date. 4. Isolate HVAC system in area where work is being done to prevent contamination of duct system. 5. Maintain negative air pressure within work site utilizing HEPA equipped air filtration. 6. Complete all critical barriers or implement control cube method before construction begins. 7. Do not remove barriers from work area until complete project is thoroughly cleaned and cleared by FMS. 8. Vacuum work area with HEPA filtered vacuums. 9. Wet mop area with disinfectant. 10. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 11. Contain construction waste before transport in tightly covered containers. 12. Cover transport receptacles or carts. Tape covering. 13. Remove or isolate HVAC system in areas where work is being performed. 14. Other:					

CLASS IV (Circle or highlight all that apply)					
Exceptions/Additional requirements to this permit are noted by comments or attached memoranda:					
Project Manag	er:	Date:	Infection Control Approval Sign	nature: *	Date:

Approved: 7/25/12

CONSTRUCTION ACTIVITY TYPES:

Type "A"	Inspection and Non-Invasive Activities. Includes, but is not limited to, removal of ceiling tiles for visual inspection limited to 1 tile per 50 square feet, painting (but not sanding), wall covering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.
Type "B"	Small scale, short duration activities which create minimal dust. Includes, but not limited to, installation of telephone and computer cabling, access to chase spaces, cutting of walls or ceiling where dust migration can be controlled.
Type "C"	Any work which generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies. Includes, but is not limited to, sanding of walls for painting or wall covering, removal of floor coverings, ceiling tiles and casework, new wall construction, minor ductwork or electrical work above ceilings, major cabling activities, and any activity which cannot be completed within a single work shift
Type "D"	Major demolition and construction project. Includes, but is not limited to, activities which require consecutive work shifts, requires heavy demolition or removal of a complete cabling system, and new construction.

INFECTION CONTROL RISK GROUPS THAT ARE IN THESE AREAS OR IN PROXIMITY TO THESE AREAS:

Group I	Group 2	Group 3	Group 4
Low	Moderate	Medium	High
Office	Domiciliary Bed	 Outpatient Clinic Inpatient Clinic Radiology PT-Tank Areas Infirmary/Treatment	 Laboratories (Specimen) Pharmacy Isolation Rooms SPD Cleaning and Contamination Room
Areas	Buildings	Room	

Approved: 7/25/12

CONSTRUCTION ACTIVITY/INFECTION CONTROL MATRIX:

CONCINCOTION NOTITI I JIM ECTION CONTINCE III/(III)				
	TYPE	TYPE	TYPE	TYPE
CONSTRUCTION ACTIVITY	"A"	"B"	"C"	"D"
RISK LEVEL ↓				
GROUP 1	1	II	II	III/IV
GROUP 2	1	II	III	IV
GROUP 3	1	III	III/IV	IV
GROUP 4	III	III/IV	III/IV	IV

^{*}Infection Control Signature required when Construction Activity and Risk Level indicate that Class III and Class IV control procedures are necessary.

CONSTRUCTION WORKER/PATIENT TB RISK ASSESSMENT

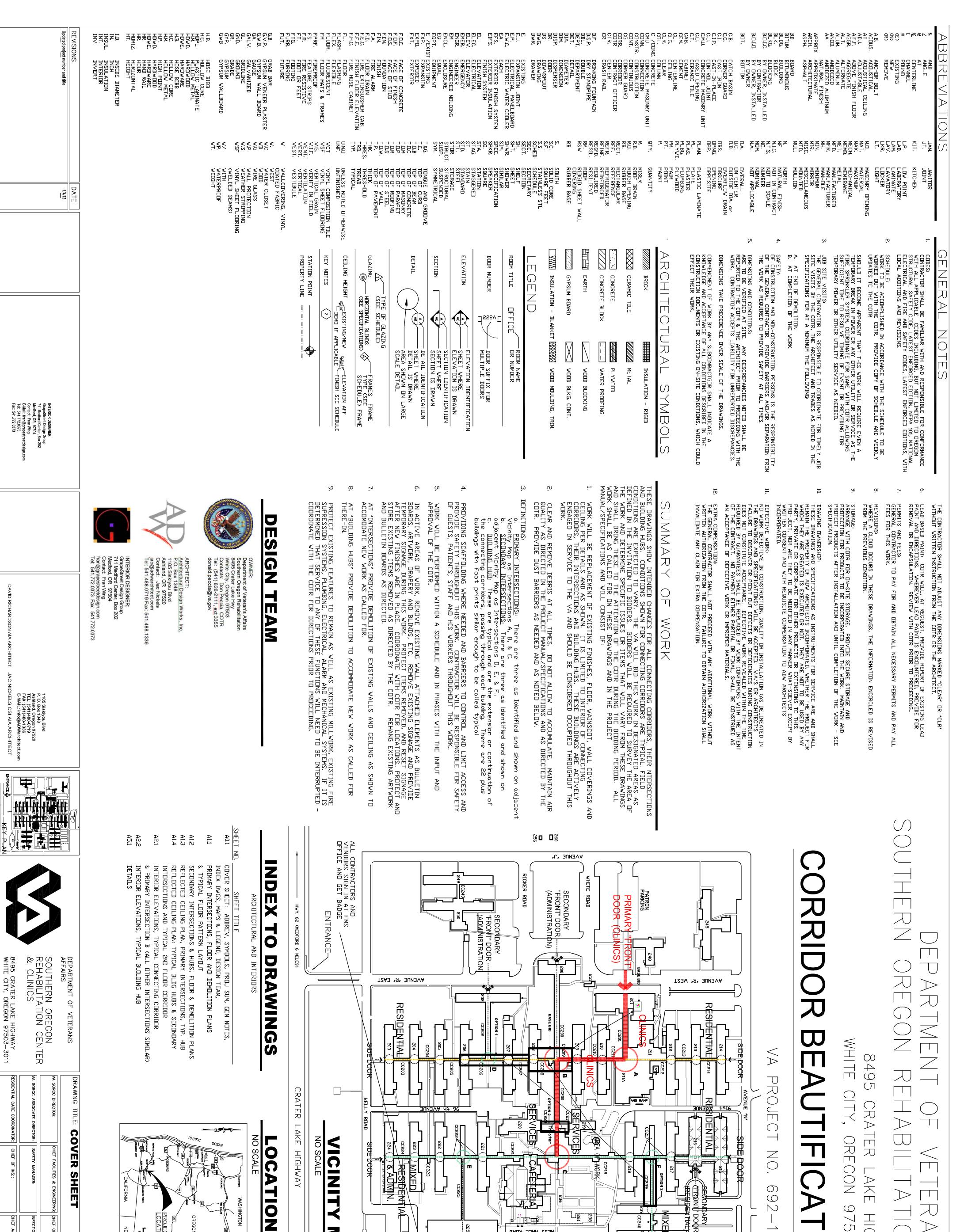
A. Contractor TB Risk Potential Assessment From Exposure to Staff/Patients:

Approved: 7/25/12

The Oregon Department of Public Health has determined Southern Oregon TB case rate is extremely low; 0.5 cases per 100, 000 and dropping as compared to the national average of 3.6 per 100,000. That data, combined with testing of our patients and staff, all but eliminates the potential for contractors to acquire TB from SORCC staff or patients (MCM IC-026; Tuberculosis Program).

B. Patient/Staff TB Risk Potential Assessment From Exposure to Contractors:

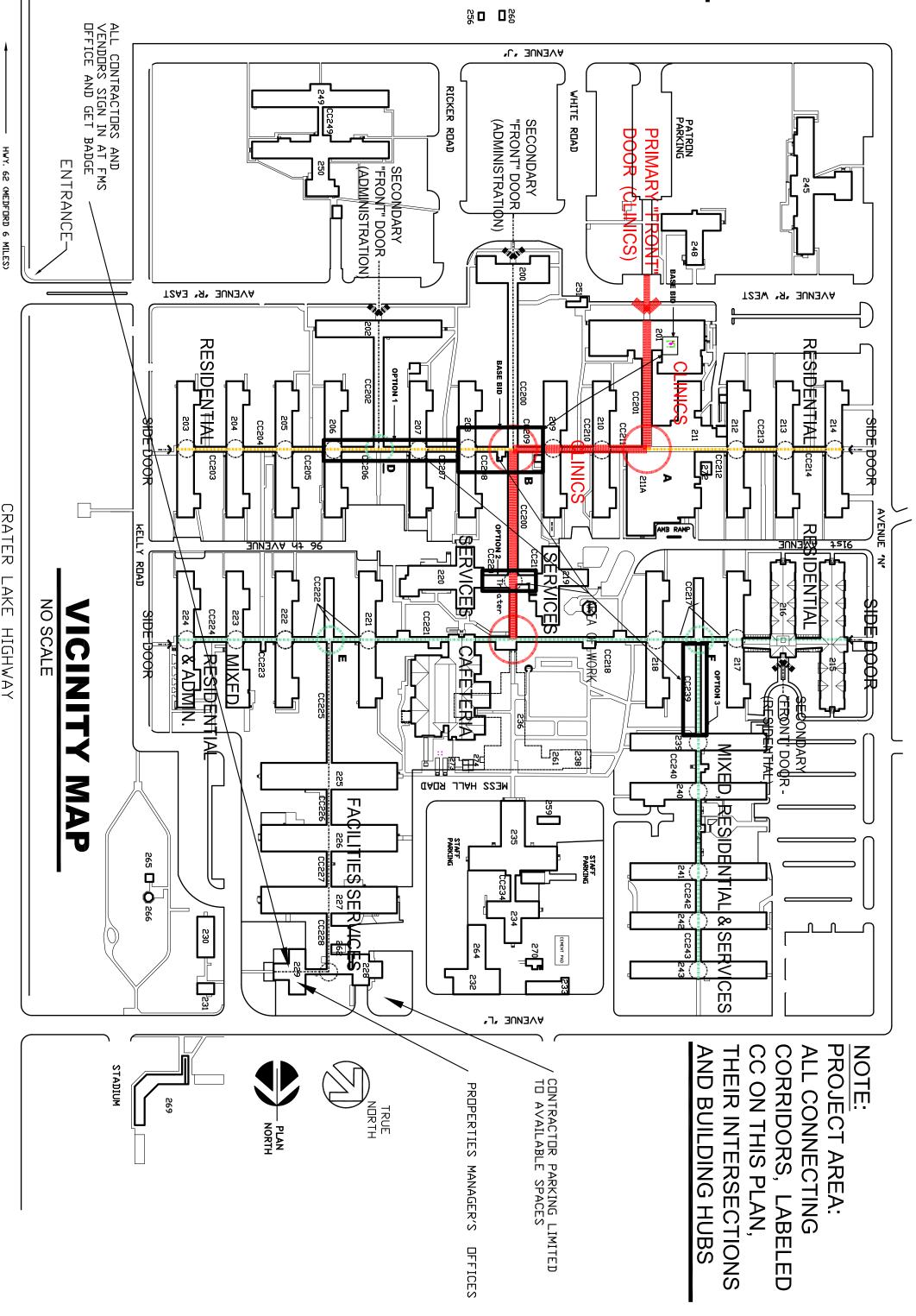
SELECTION OF TB RISK POTENTIAL	INFECTION CONTROL RISK ASSESSMENST GROUPS			
	GROUP 1: Low Risk Potential; No contact with patients; No co required.	ntractor testing		
X	GROUP 2: Elevated Risk Potential; Contractors will have contact with patients. Contractor to provide COTR with appropriate documentation validating absence of TB among contractors or, contractor to provide Infection control plan to eliminate exposure to patients.			
Exceptions/Additional requirements to this assessment are noted by comments or attached memoranda:				
COTR Signatu	re:	Date:		



97503 HIGHWAY 3011

20 <u>ORING</u>

692 \bigcirc 207



3011

CHIEF OF STAFF:

INTERIORS, CORRIDORS
VA DOMICILIARY,
WHITE CITY OREGON

DATE: 01-04-2012

VA PROJECT NO.: **692-12-207**

US DEPARTMENT OF ETERANS AFFAIR

INFECTION CONTROL

BUILDING NO.: DOMICILIARY

WDR DRAWN:

WHITE

CITY, OREGON 97503

DWG:

AO.

PROJECT LOCATION

CIRCULATION, NORTH CORRIDORS

SECONDARY INTERSECTION

SECONDARY CIRCURLATION

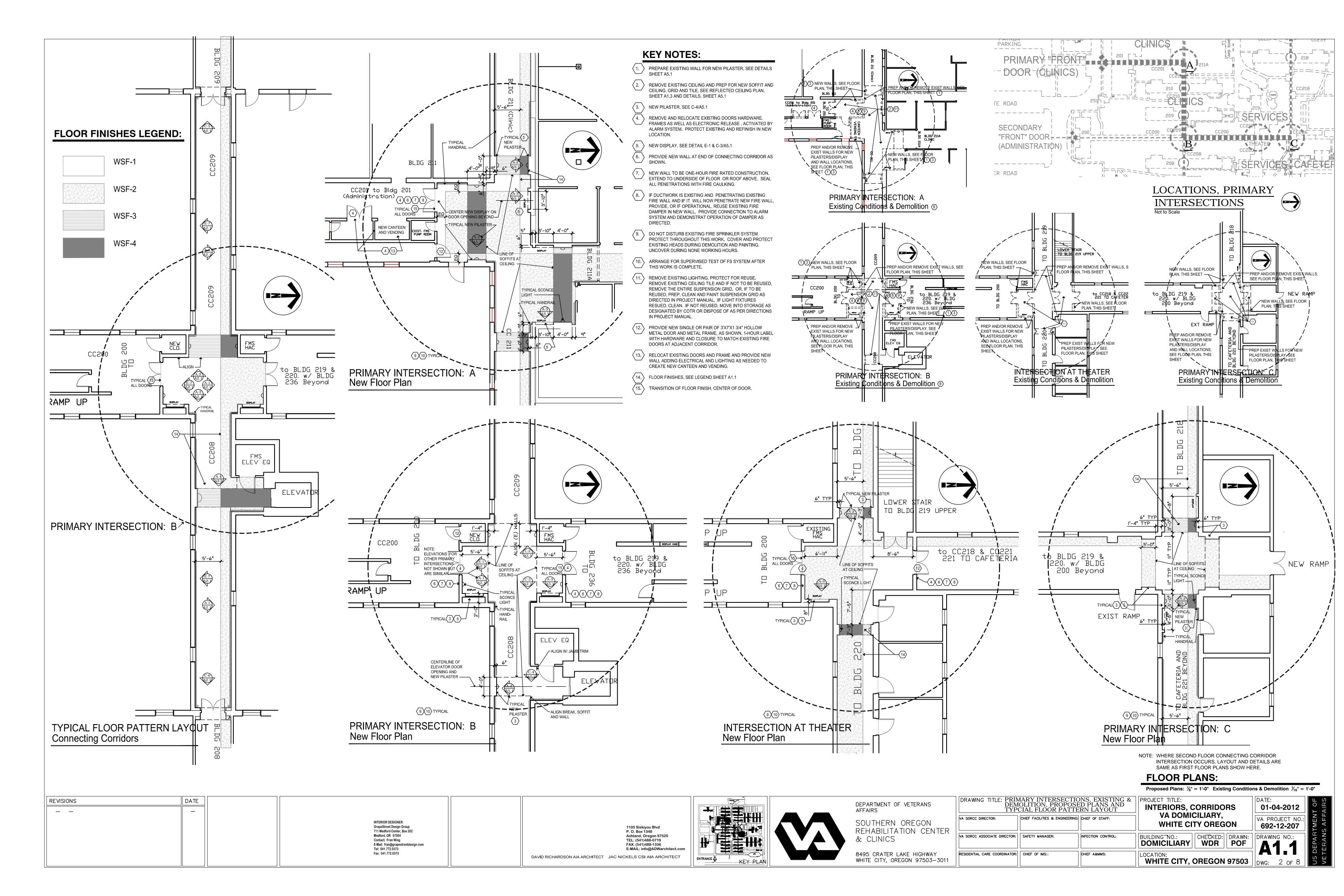
MAP

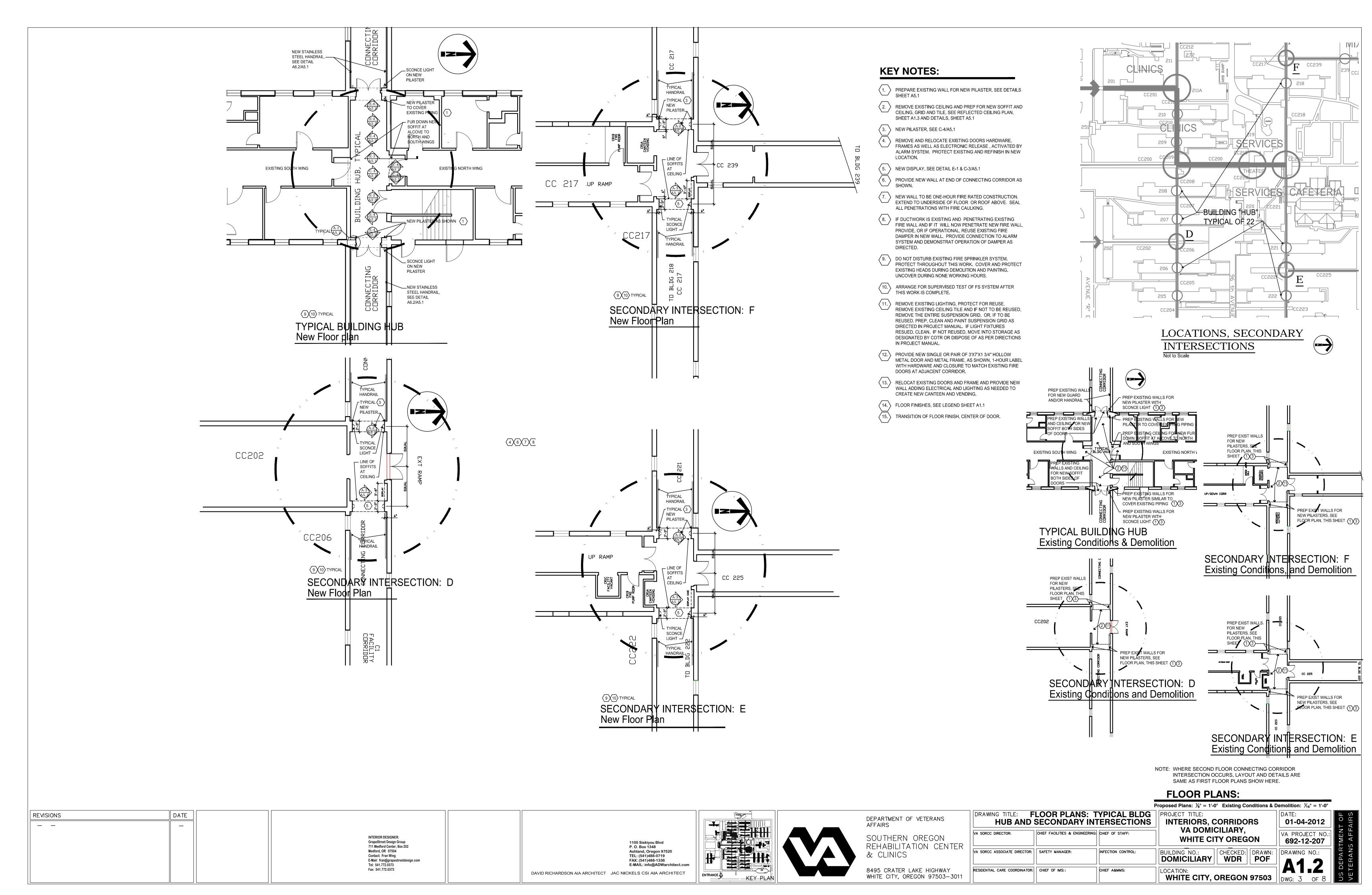
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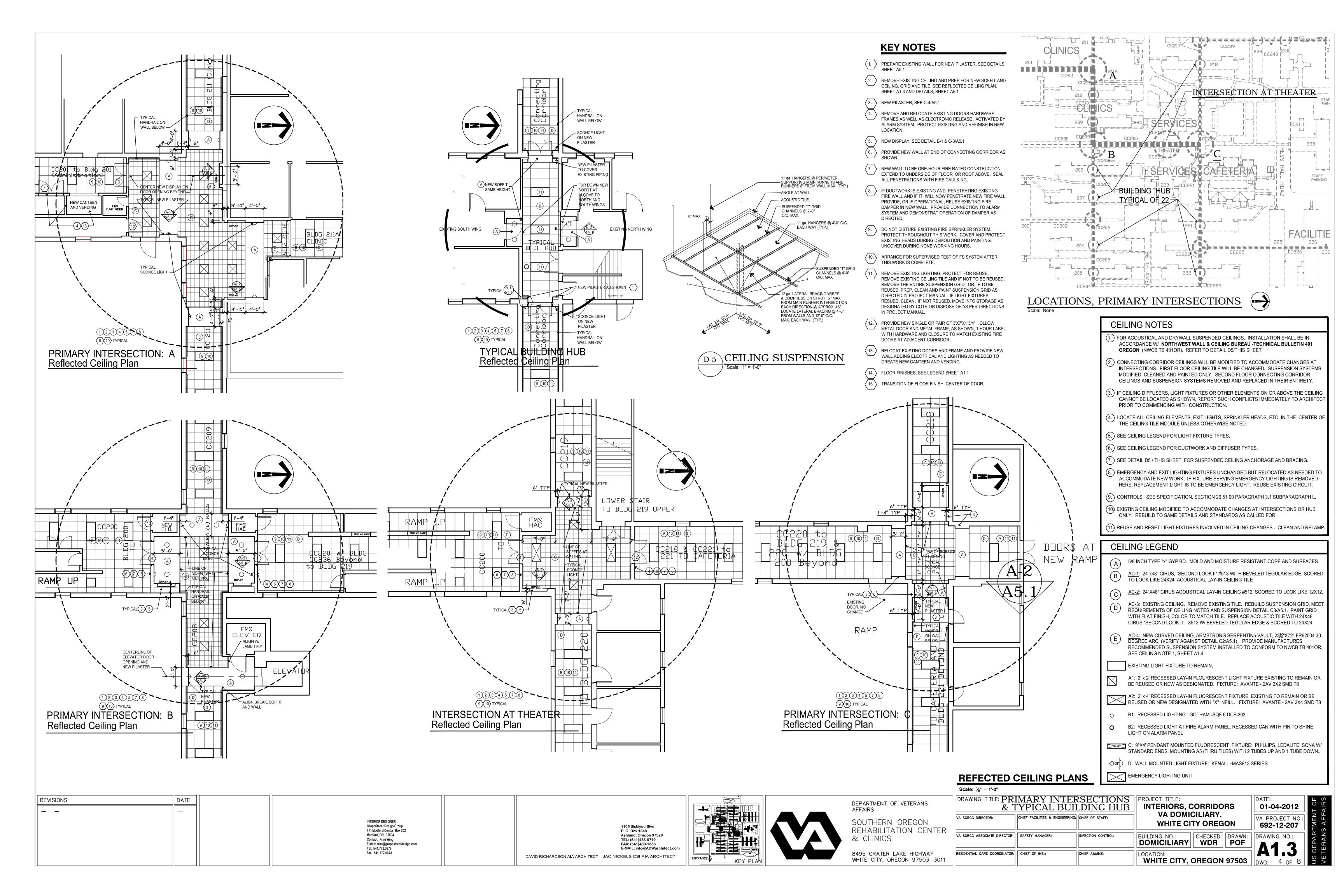
GEND

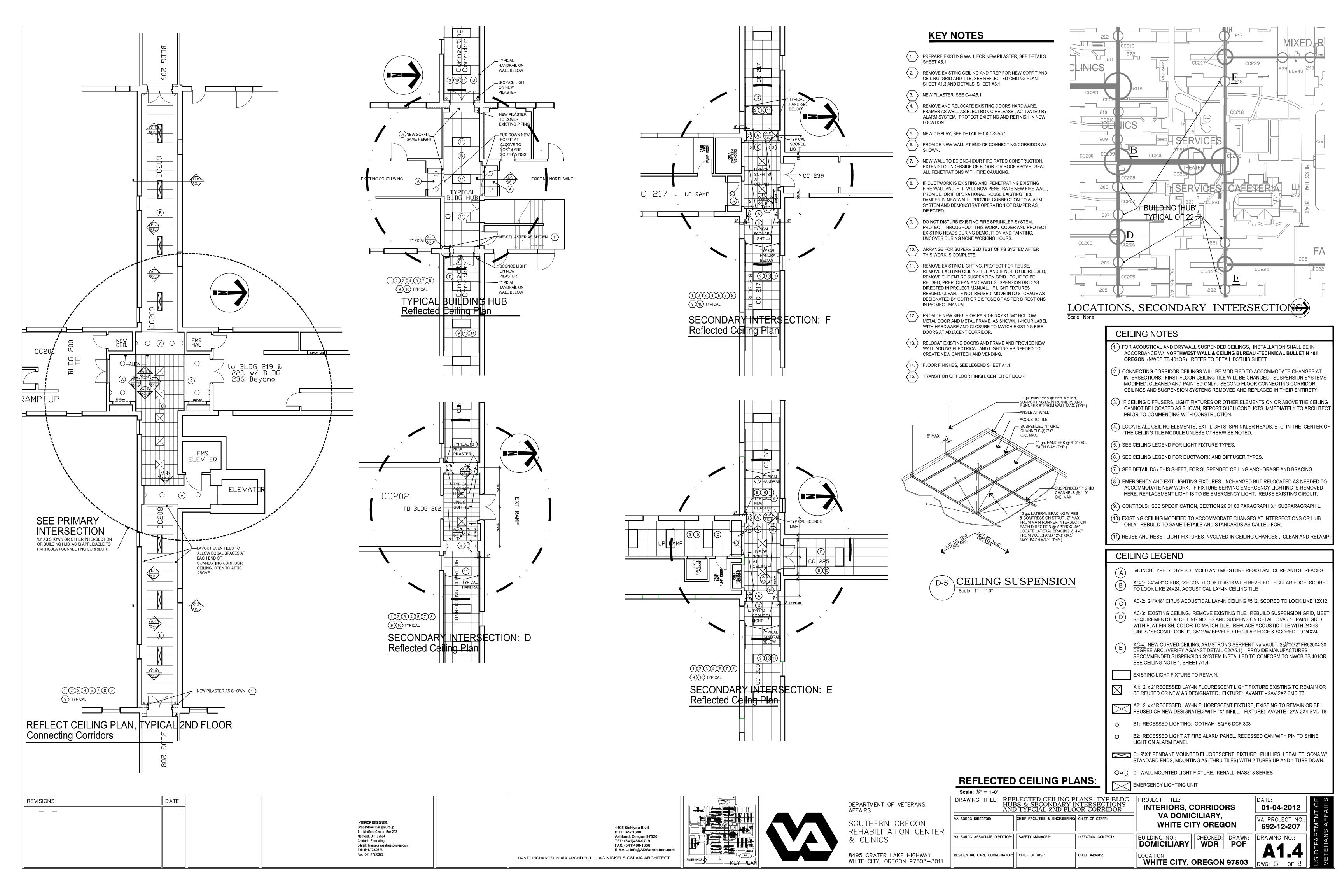
NEVADA

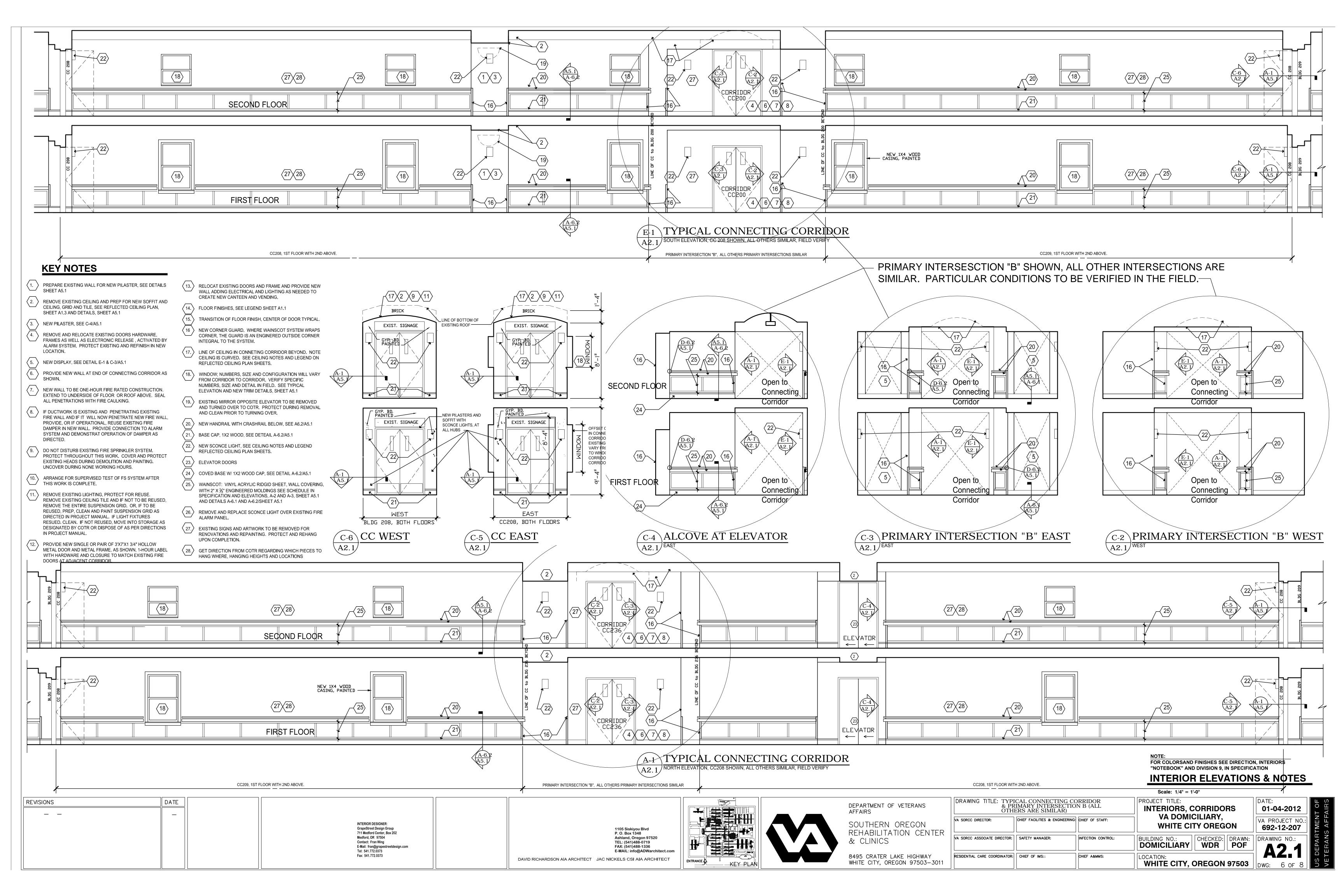
INTERSECTION, TYPICAL HUB, EXISTING BUILDING

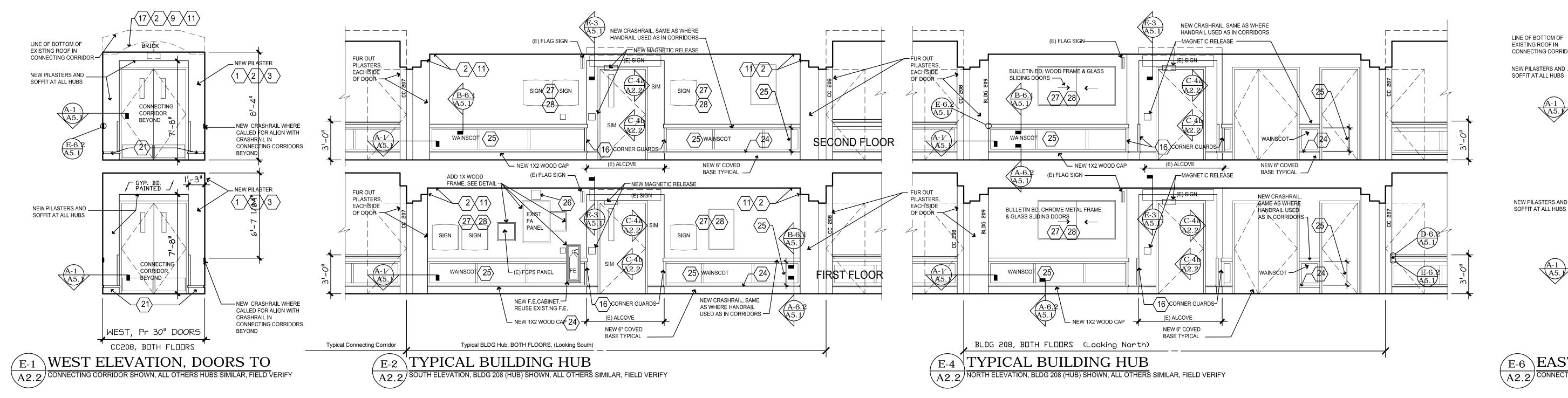












EAST, PR 30" DOORS BEYOND E-6 EAST ELEVATION, DOORS TO $\overline{\left(\text{A2.2} \right)}$ CONNECTING CORRIDOR SHOWN, ALL OTHERS HUBS SIMILAR, FIELD VERIFY

CONNECTING 1 CORRIDOR, ^

 $\frac{17}{2} \sqrt{9} \sqrt{11}$

CONNECTING

CORRIDOR

GYP BD, PAINTED -

 $\langle 1 \rangle \langle 2 \rangle \langle 3 \rangle$

- NEW CRASHRAIL WHERE

CALLED FOR ALIGN WITH CRASHRAIL IN

CONNECTING CORRIDORS

- NEW CRASHRAIL WHERE

CALLED FOR ALIGN WITH

CONNECTING CORRIDORS

CRASHRAIL IN

BEYOND

NEW PILASTER

CONNECTING CORRIDOR

NEW PILASTERS AND

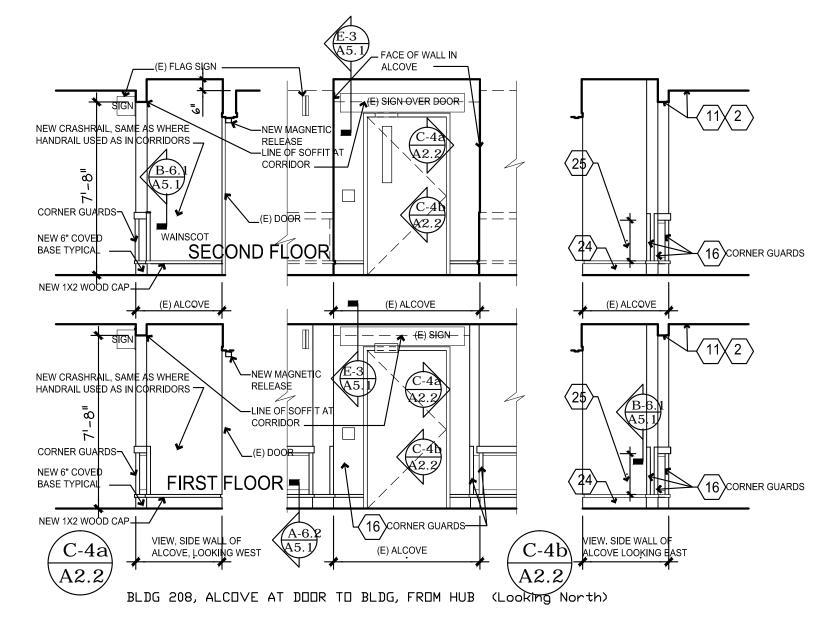
NEW PILASTERS AND .

SOFFIT AT ALL HUBS

KEY NOTES

- (1.) PREPARE EXISTING WALL FOR NEW PILASTER, SEE DETAILS
- (2.) REMOVE EXISTING CEILING AND PREP FOR NEW SOFFIT AND CEILING, GRID AND TILE, SEE REFLECTED CEILING PLAN, SHEET A1.3 AND DETAILS, SHEET A5.1
- (3.) NEW PILASTER, SEE C-4/A5.1
- 4. REMOVE AND RELOCATE EXISTING DOORS HARDWARE, FRAMES AS WELL AS ELECTRONIC RELEASE, ACTIVATED BY ALARM SYSTEM. PROTECT EXISTING AND REFINISH IN NEW
- (5.) NEW DISPLAY, SEE DETAIL E-1 & C-3/A5.1
- 6. PROVIDE NEW WALL AT END OF CONNECTING CORRIDOR AS
- 7. NEW WALL TO BE ONE-HOUR FIRE RATED CONSTRUCTION. EXTEND TO UNDERSIDE OF FLOOR OR ROOF ABOVE. SEAL ALL PENETRATIONS WITH FIRE CAULKING.
- (8.) IF DUCTWORK IS EXISTING AND PENETRATING EXISTING FIRE WALL AND IF IT WILL NOW PENETRATE NEW FIRE WALL, PROVIDE, OR IF OPERATIONAL, REUSE EXISTING FIRE DAMPER IN NEW WALL. PROVIDE CONNECTION TO ALARM SYSTEM AND DEMONSTRAT OPERATION OF DAMPER AS
- √9.
 → DO NOT DISTURB EXISTING FIRE SPRINKLER SYSTEM. PROTECT THROUGHOUT THIS WORK. COVER AND PROTECT EXISTING HEADS DURING DEMOLITION AND PAINTING. UNCOVER DURING NONE WORKING HOURS.
- (10.) ARRANGE FOR SUPERVISED TEST OF FS SYSTEM AFTER THIS WORK IS COMPLETE.
- (11.) REMOVE EXISTING LIGHTING, PROTECT FOR REUSE. REMOVE EXISTING CEILING TILE AND IF NOT TO BE REUSED, REMOVE THE ENTIRE SUSPENSION GRID. OR, IF TO BE REUSED, PREP, CLEAN AND PAINT SUSPENSION GRID AS DIRECTED IN PROJECT MANUAL. IF LIGHT FIXTURES RESUED. CLEAN. IF NOT REUSED, MOVE INTO STORAGE AS DESIGNATED BY COTR OR DISPOSE OF AS PER DIRECTIONS
- 12. PROVIDE NEW SINGLE OR PAIR OF 3'X7'X1 3/4" HOLLOW METAL DOOR AND METAL FRAME, AS SHOWN, 1-HOUR LABEL WITH HARDWARE AND CLOSURE TO MATCH EXISTING FIRE DOORS AT ADJACENT CORRIDOR.
- (13.) RELOCAT EXISTING DOORS AND FRAME AND PROVIDE NEW WALL ADDING ELECTRICAL AND LIGHTING AS NEEDED TO CREATE NEW CANTEEN AND VENDING.
- (14.) FLOOR FINISHES, SEE LEGEND SHEET A1.1
- \langle 15. \rangle TRANSITION OF FLOOR FINISH, CENTER OF DOOR TYPICAL.

- (16) NEW CORNER GUARD. WHERE WAINSCOT SYSTEM WRAPS CORNER, THE GUARD IS AN ENGINERED OUTSIDE CORNER INTEGRAL TO THE SYSTEM.
- LINE OF CEILING IN CONNETING CORRIDOR BEYOND. NOTE CEILING IS CURVED. SEE CEILING NOTES AND LEGEND ON REFLECTED CEILING PLAN SHEETS.
- WINDOW; NUMBERS, SIZE AND CONFIGURATION WILL VARY FROM CORRIDOR TO CORRIDOR. VERIFY SPECIFIC NUMBERS, SIZE AND DETAIL IN FIELD. SEE TYPICAL ELEVATION AND NEW TRIM DETAILS, SHEET A5.1
- (19.) EXISTING MIRROR OPPOSITE ELEVATOR TO BE REMOVED AND TURNED OVER TO COTR. PROTECT DURING REMOVAL AND CLEAN PRIOR TO TURNING OVER.
- 20. NEW HANDRAIL WITH CRASHRAIL BELOW, SEE A6.2/A5.1
- (21.) BASE CAP, 1X2 WOOD, SEE DETEAIL A-6.2/A5.1
- (22.) NEW SCONCE LIGHT, SEE CEILING NOTES AND LEGEND REFLECTED CEILING PLAN SHEETS.
- (23.) ELEVATOR DOORS
- 24 COVED BASE W/ 1X2 WOOD CAP, SEE DETAIL A-6.2/A5.1
- WAINSCOT: VINYL ACRYLIC RIDGID SHEET, WALL COVERING, WITH 2" X 3/8" ENGINEERED MOLDINGS SEE SCHEDULE IN SPECIFICATION AND ELEVATIONS, A-2 AND A-3, SHEET A5.1 AND DETAILS A-6.1 AND A-6.2/SHEET A5.1
- (26.) REMOVE AND REPLACE SCONCE LIGHT OVER EXISTING FIRE ALARM PANEL.
- 27. EXISTING SIGNS AND ARTWORK TO BE REMOVED FOR RENOVATIONS AND REPAINTING. PROTECT AND REHANG
- 28. GET DIRECTION FROM COTR REGARDING WHICH PIECES TO HANG WHERE, HANGING HEIGHTS AND LOCATIONS



C-4 ALCOVE AND DOOR TO NORTH SIDE OF BLDG A2.2 ALL ALCOVES SIMILAR, VERIFY DIFFERENCES IN FIELD

> FOR COLORSAND FINISHES SEE DIRECTION, INTERIORS "NOTEBOOK" AND DIVISION 9, IN SPECIFICATION

INTERIOR ELEVATIONS & NOTES

Scale: 1/4" = 1'-0"

PROJECT TITLE: INTERIORS, CORRIDORS VA DOMICILIARY. WHITE CITY OREGON

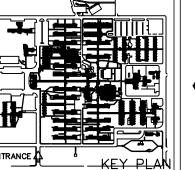
01-04-2012 VA PROJECT NO. 692-12-207 DRAWING NO.:

WHITE CITY, OREGON 97503

REVISIONS DATE INTERIOR DESIGNER: Medford, OR 97504 Contact: Fran Wing E-Mail: fran@grapestreet Tel: 541.772.0373 Fax: 541.772.0373

GrapeStreet Design Group 711 Medford Center, Box 202

1105 Siskiyou Blvd P. O. Box 1348 Ashland, Oregon 97520 TEL: (541)488-0719 FAX: (541)488-1336 E-MAIL: info@ADWarchitect.com DAVID RICHARDSON AIA ARCHITECT JAC NICKELS CSI AIA ARCHITECT





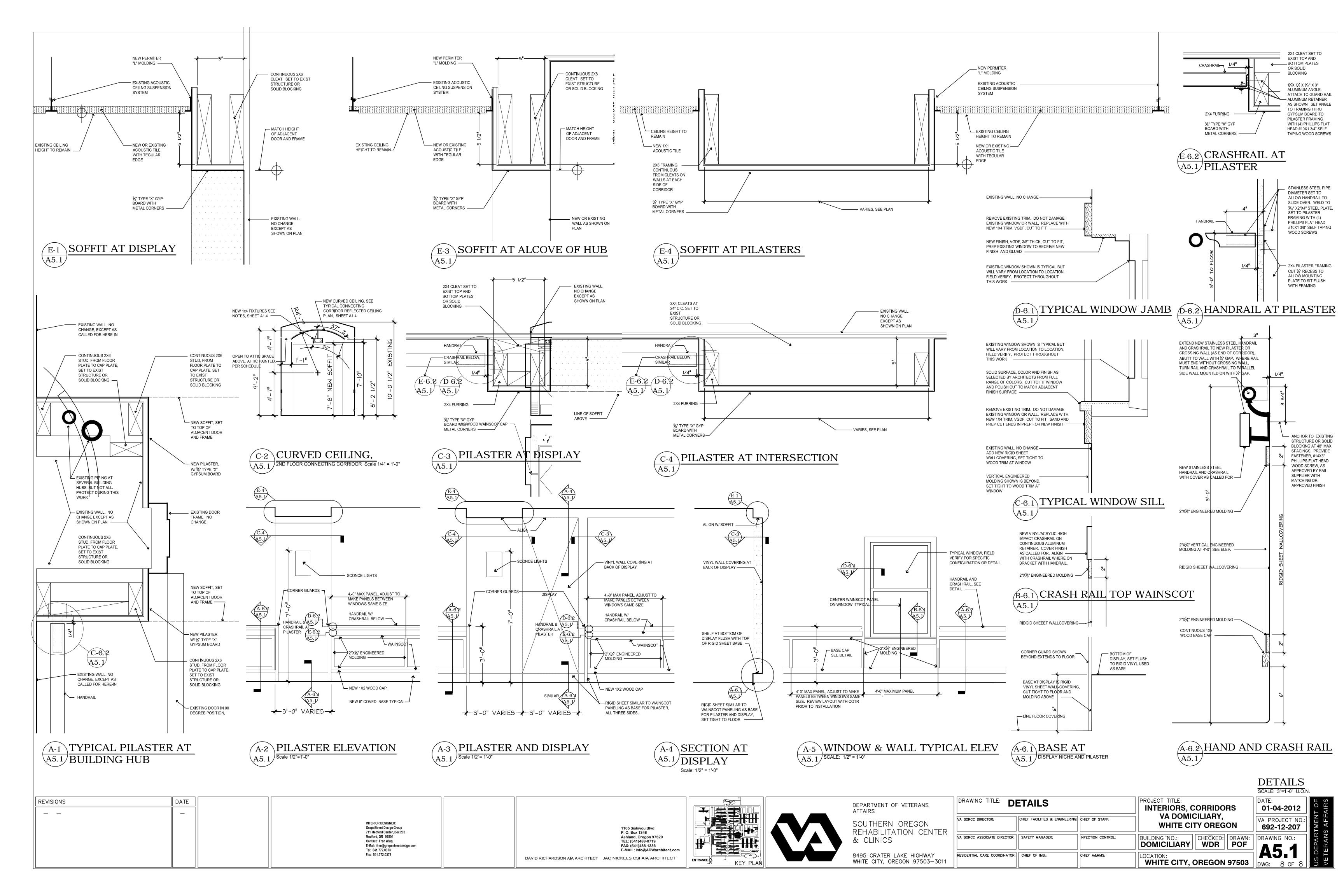
DEPARTMENT OF VETERANS AFFAIRS SOUTHERN OREGON REHABILITATION CENTER & CLINICS

8495 CRATER LAKE HIGHWAY WHITE CITY, OREGON 97503-3011

VA SORCC DIRECTOR: CHIEF FACILITIES & ENGINEERING: CHIEF OF STAFF: 'A SORCC ASSOCIATE DIRECTOR: SAFETY MANAGER: INFECTION CONTROL: BUILDING NO.: | CHECKED: DRAWN: DOMICILIARY | WDR | POF RESIDENTIAL CARE COORDINATOR: CHIEF OF IMS:: LOCATION:

(ALL OTHER HUBS ARE SIMILAR)

DRAWING TITLE: TYPICAL BUILDING HUB



SCOPE OF WORK - CORRIDOR BEAUTIFICATION AND FLOORING

Description of work:

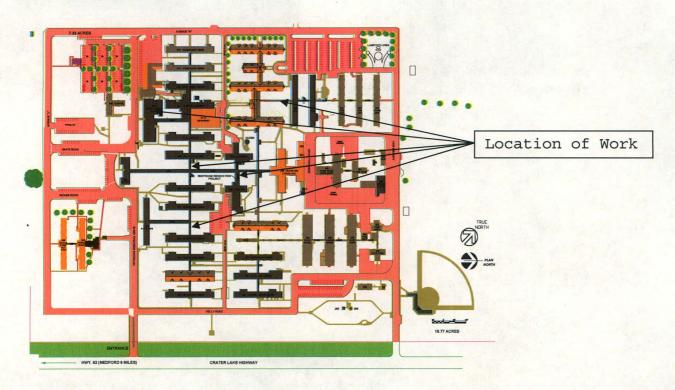


Figure 1: Site Plan and Project Location

This project includes, but is not necessarily limited to, the enhancement of the environment in connecting corridors 1. from the East side of Building 209 to the East side of B208 where the B208 Hub intersects with CC207 (approximately 1200 square feet) and B201-216A Corridor (approximately 300 square feet); 2. CC220 and CC219 between B220 (Theater) and B219 (Canteen), (approximately 885 square feet); 3. CC239 (approximately 1380 square feet); and 4. CC207 through B206 Hub (approximately 2015 square feet). Work is limited to first floor only in all sections. Contractor to remove and replace all furniture, pictures, mirrors or other items that are located in the construction area. When completed, all work will meet drawing and specification requirements as well as manufacturer's recommended installation procedures. All work will be performed on off-shifts after 5:00 PM or on weekends and will be phased to minimize interruptions to the VA staff, residents and patients.

A. Base Bid - CC209, CC208 and B208 Hub Enhancement includes B201-216A Corridor (approximately 1500 square feet). Work includes:

- 1. Demolition of existing flooring down to subfloor, removal of existing wainscot, removal of existing handrails, demolition of existing ceiling and lights. Remove one heating unit in ceiling including cutting steam lines back to main and capping, removal of electrical conduit and wire back to panel and patching hard ceiling. Seal penetrations to exterior of building with like materials as are currently present. Provide removed handrails to VA.
- 2. Reconfigure hubs and intersections per drawings.
- Repair of existing subfloor, assume approximately 400 square feet of subfloor needs to be replaced, repair of floor joists, assume approximately 100 lineal feet of joists 2x10, to be installed.
- 4. Install new underlayment and sheet vinyl.
- 5. Patch, repair or replace gypsum wall board to provide a smooth wall surface.
- 6. Install new T-Bar and accoustical ceiling. Adjust sprinkler heads as needed to fit new grid pattern.
- 7. Install new light fixtures, lamps per drawings and circuits. Relocate smoke detectors to fit new grid patterns.
- 8. Texture, paint and install new wainscot as described in the finish schedule in the specifications.
- 9. Remove 8 windows and replace with new vinyl windows per specifications.
- 10. Build chases for pipe lines exposed and extending from the floor to ceiling.
- 11. Project includes the intersection of CC200 to CC208 listed as Hub B on the drawings.

B. Option 1 - CC220 and CC219 Enhancement includes (approximately 885 square feet):

- Demolition of existing flooring down to subfloor, removal of existing wainscot, removal of existing handrails, demolition of existing ceiling and lights. Provide removed handrails to VA.
- 2. Reconfigure hubs and intersections per drawings.

- Repair of existing subfloor, assume approximately 150 square feet of subfloor needs to be replaced, repair of floor joists, assume approximately 100 lineal feet of joists 2x10, to be installed.
- 4. Install new underlayment and sheet vinyl.
- 5. Patch, repair or replace gypsum wall board to provide a smooth wall surface.
- 6. Install new T-Bar and accoustical ceiling. Adjust sprinkler heads as needed to fit new grid pattern.
- Install new light fixtures, lamps per drawings and circuits. Relocate smoke detectors to fit new grid patterns.
- 8. Texture, paint and install new wainscot as described in the finish schedule in the specifications.
- Remove one window in CC219 and replace with new vinyl window per specifications. Remove two windows in CC220 and replace with new vinyl windows per specifications.
- 10. Build chases for pipe lines exposed and extending from the floor to ceiling.
- 11. CC220 will include the intersection of CC200 between CC220 and CC219.

C. Option 2 - CC239 Enhancements include (approximately 1380 square feet):

- Demolition of existing flooring down to subfloor, remove existing wainscot and remove existing handrails. Remove existing heater, cut steam lines back to main and cap. Provide removed handrails to VA.
- Repair existing subfloor, assume approximately 400 square feet of subfloor needs to be replaced, repair of floor joists, assume approximately 100 lineal feet of joists 2x10, to be installed.
- 3. Install new underlayment and sheet vinyl.
- 4. Patch, repair or replace gypsum wall board to provide a smooth wall surface.
- 5. Turn existing lights 90 degrees, repair ceiling grid and tile. Adjust sprinkler heads as needed to fit new grid pattern.
- Install new light fixtures, lamps per drawings and circuits. Relocate smoke detectors to fit new grid patterns.
- 7. Texture, paint and install new wainscot as described in the finish schedule in the

specifications.

- 8. Remove 12 windows and replace with new vinyl windows per specifications.
- 9. Build chases for pipe lines exposed and extending from the floor to ceiling.

D. Option 3 – B206 Hub, CC206 and CC207 Enhancements include (approximately 2015 square feet):

- Demolition of existing flooring down to subfloor, remove existing wainscot and remove existing handrails. Remove two heating units in ceiling including cutting and removing steam lines back to main and capping, removal of electrical conduit and wire back to panel and patching hard ceiling. Seal penetrations to exterior of building with like materials as are currently present. Provide removed handrails to VA.
- Repair existing subfloor, assume approximately 150 square feet of subfloor needs to be replaced, repair of floor joists, assume approximately 100 lineal feet of joists 2x10, to be installed.
- 3. Install new underlayment and sheet vinyl.
- 4. Patch, repair or replace gypsum wall board to provide a smooth wall surface.
- 5. Turn existing lights 90 degrees, repair ceiling grid and tile. Adjust sprinkler heads as needed to fit new grid pattern.
- Install new light fixtures, lamps per drawings and circuits. Relocate smoke detectors to fit new grid patterns.
- 7. Texture, paint and install new wainscot as described in the finish schedule in the specifications. Install new window trim.
- 8. Build chases for pipe lines exposed and extending from the floor to ceiling.
- 9. Remove 15 windows and replace with new vinyl windows per specifications.

Work to conform to specifications.

Environmental:

With the age of the facility lead paint and or asbestos may be encountered. The crawl space under the floor is considered a regulated area for asbestos. Appropriate

Corridor Beautification and Flooring Project No. 692-13-207

VA SORCC White City, OR

precautions will need to be taken. Any opening in the floor that will provide exposure to the regulated areas will need to be contained until the opening is resealed.